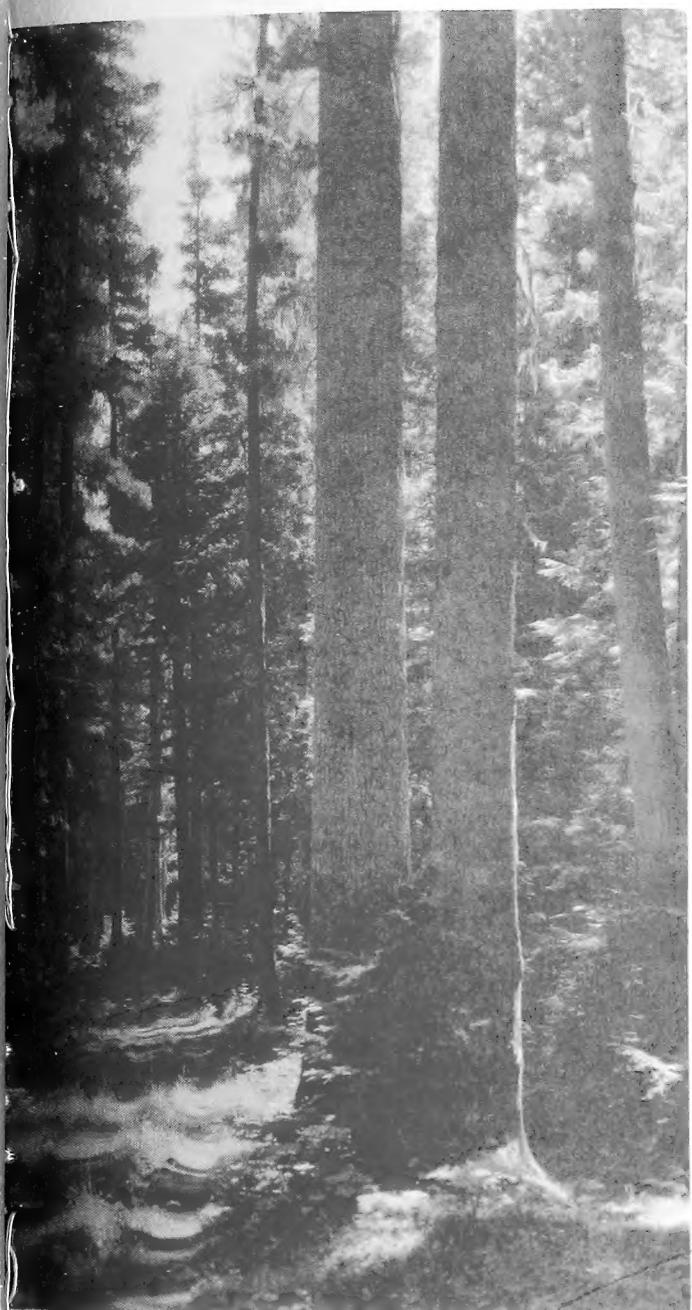


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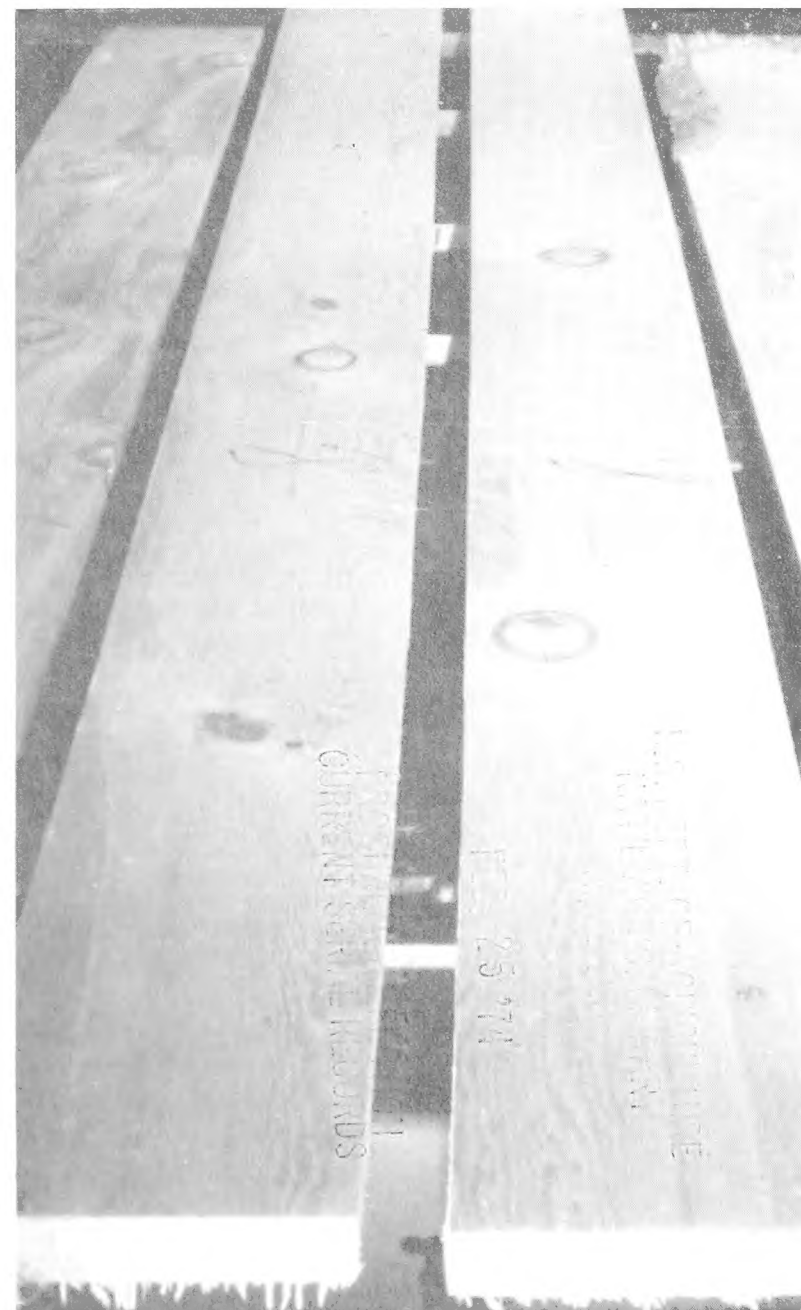
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CURE LIST



2007

LUMBER
YIELD



FROM

WESTERN WHITE PINE
IN NORTHERN IDAHO

153, 30p. map. 1973.

MARLIN E. PLANK AND
THOMAS A. SNELLGROVE

[*Pinus monticola*] ✓

ACKNOWLEDGMENTS

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Particular thanks is due the following organizations:

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Region 1, U.S. Forest Service--for aid in planning the study and for personnel supplied during the milling operations.

Coeur d'Alene National Forest--personnel for fieldwork and milling operations.

Western Wood Products Association--for providing a grading supervisor.

ABSTRACT

A sample of 300 trees was selected to represent the full range in size and quality of commercial sawtimber available in northern Idaho. A net log scale of 167,900 board feet (Scribner) was sawn from 1,431 logs in a typical white pine mill, producing 212,703 board feet of lumber.

Lumber yields for each lumber grade are presented by log grade and diameter class. The study showed a recovery of 17 percent molding and selects; 5 percent No. 3 clear, No. 1 and 2 shop; and 78 percent commons.

Keywords: Log yield, western white pine, lumber, forest industries.

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INTRODUCTION

The United States contains an estimated 21 billion board feet of western white pine sawtimber.^{1/} Although western white pine ranges through the States of Idaho, Montana, Washington, Oregon, and California, about two-thirds of the board-foot volume is found in the area known as the "Inland Empire."^{2/} Approximately 93 percent of the western white pine lumber produced in the United States in 1970 was manufactured in this area.^{3/} For the years 1970-71, stumpage values for western white pine substantially exceeded the stumpage values of all other species in the Inland Empire.^{4/}

Since it is the most valuable species in this area, accurate valuation of this timber resource is important. Updated lumber recovery information for western white pine sawtimber is needed for better utilization and evaluation of the resource.

The lack of recent recovery information for evaluating western white pine sawtimber prompted a cooperative study between the Pacific Northwest Forest and Range Experiment Station, the Northern Region (Region 1) of the National Forest System, and the Idaho Forest Products Company. The purpose of the study was twofold--first, to obtain recovery information for appraisal purposes and, second, to provide information with which to improve or develop log or tree grading systems.

The specific purpose of this report is to present information on the type and volume of lumber that was produced under current industry manufacturing practices from a sample of the various grades and sizes of western white pine logs available to sawmills in northern Idaho. This information is most useful to timber appraisers, buyers, and processors, forest land managers, and forest inventory personnel.

^{1/} Information from most recent inventories of Forest Survey at the Pacific Northwest Forest and Range Experiment Station and the Intermountain Forest and Range Experiment Station.

^{2/} Inland Empire is northern Idaho, west slopes of the Rocky Mountains in Montana, and eastern Washington and Oregon.

^{3/} Western Wood Products Association 1970 Statistical Yearbook. WWPA Stat. Dep., 28 p., 1971.

^{4/} David R. Darr. Production, prices, employment, and trade in Northwest forest industries, fourth quarter 1971. USDA Forest Serv. Pac. Northwest Forest & Range Exp. Stn., 55 p., 1972.

STUDY PROCEDURES

Timber Sample

A sample of 300 trees was selected to represent the full range in size and quality of commercial sawtimber available in northern Idaho. However, two trees were not delivered to the mill; thus, this report is based on the remaining 298 sample trees. The trees were obtained from eight sample areas, shown in figure 1, on the Kaniksu, St. Joe, and Coeur d'Alene National Forests. The eight sample areas were chosen to represent differences in tree size, stem quality, and site characteristics. Within each sample area, individual trees were selected on the basis of d.b.h. to fulfill overall sample objectives. The total sample was not intended to be representative of the normal mix for any particular mill or specified time. Averages for some characteristics of the sample trees by area are shown in table 1.

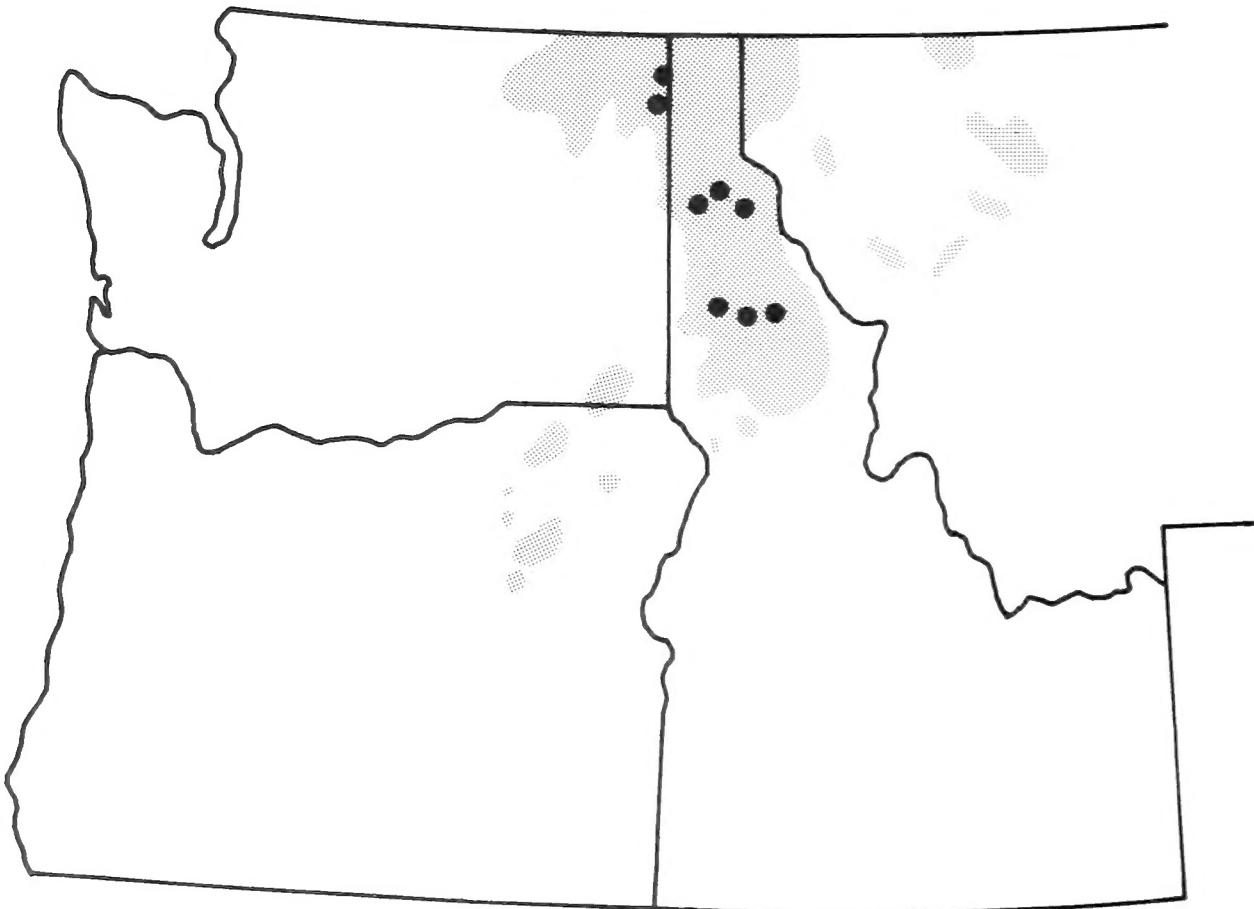


Figure 1.--Range of western white pine in the "Inland Empire" and general location of the eight areas from which study trees were cut.

Table 1.--Averages for some characteristics of study trees by sample areas

| Characteristic | Sample area | | | | | | | | Total |
|----------------------------|-------------|-----------|-----------|-----------|----------|-----------|-----------|----------|----------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | |
| d.b.h. range (inches) | 9.9-33.1 | 11.0-29.6 | 10.4-45.0 | 10.9-21.9 | 9.1-22.3 | 26.5-54.0 | 10.5-34.1 | 9.3-24.3 | 9.1-54.0 |
| average d.b.h. (inches) | 14.4 | 23.5 | 20.9 | 17.1 | 13.3 | 38.4 | 21.9 | 15.2 | 19.2 |
| tree height range (feet) | 60-125 | 83-173 | 71-200 | 80-144 | 81-125 | 144-215 | 71-179 | 84-137 | 60-215 |
| average tree height (feet) | 94 | 142 | 126 | 114 | 102 | 184 | 142 | 109 | 120 |
| defect range (percent) | 0-66 | 0-51 | 0-91 | 0-19 | 0-29 | 10-98 | 0-56 | 0-39 | 0-98 |
| average defect (percent) | 9.2 | 10.9 | 18.6 | 7.8 | 4.0 | 40.5 | 13.8 | 4.4 | 12.8 |
| age range (years) | 49-134 | 107-211 | 60-170 | 58-111 | 53-88 | 237-336 | 123-290 | 58-77 | 49-336 |
| average age (years) | 74 | 176 | 93 | 84 | 66 | 299 | 213 | 66 | 117 |
| number of trees | 70 | 25 | 54 | 20 | 40 | 26 | 27 | 36 | 298 |

LOGGING, IDENTIFICATION, AND DIAGRAMING

The study trees were felled and bucked into saw logs by cooperating logging contractors according to normal industry practice. Each log was tagged in the woods to identify its origin with respect to tree and position in the tree.

The visible surface characteristics of each log were examined and recorded immediately after the trees were felled. Hence, the relationship of the external characteristics of a log to its lumber grades and yield could be analyzed to refine or develop log or tree grades. This record was also used to determine the grade^{5/} of the logs presented in this report.

TRANSPORTATION AND SCALING

The study logs were trucked to the cooperating mill for scaling and storage before sawing. The woods-length logs were scaled in the yard by the Western Wood Products Association and the U. S. Forest Service in accordance with the National Forest Service Log Scaling Handbook as of 1968. The logs were bucked in the yard and rescaled as mill-length logs according to the above rules. In this report, all log volumes are based on this scale.

The 298 sample trees produced 1,402 merchantable logs. The distribution of these logs plus the 29 cull logs by scaling diameter, length, and log grade is shown in tables 2 and 3.

Lumber Manufacturing

Sawing, drying, and surfacing practices of the mill were representative of general industry practice in that area. Log identity was maintained on each piece of lumber through the manufacturing process to the final point of grade and tally.

^{5/} Forest Survey Grades - U. S. Forest Service Form R1-2420-3.

Table 2.--Distribution of study logs by scaling diameter and log grade

| Log diameter (inches) | Log grade | | | | | |
|----------------------------|-----------|----|-----|-------|----|------------|
| | 1 | 2 | 3 | 4 | 9 | All grades |
| ----- Number of logs ----- | | | | | | |
| 4 | 0 | 0 | 1 | 0 | 0 | 1 |
| 5 | 0 | 0 | 4 | 1 | 0 | 5 |
| 6 | 0 | 0 | 26 | 14 | 0 | 40 |
| 7 | 0 | 0 | 60 | 55 | 0 | 115 |
| 8 | 0 | 1 | 46 | 80 | 0 | 127 |
| 9 | 0 | 0 | 29 | 113 | 0 | 142 |
| 10 | 0 | 1 | 30 | 108 | 0 | 139 |
| 11 | 0 | 3 | 12 | 104 | 0 | 119 |
| 12 | 0 | 3 | 10 | 96 | 1 | 110 |
| 13 | 0 | 2 | 6 | 85 | 1 | 94 |
| 14 | 0 | 2 | 4 | 77 | 0 | 83 |
| 15 | 0 | 1 | 2 | 65 | 0 | 68 |
| 16 | 0 | 2 | 1 | 47 | 1 | 51 |
| 17 | 0 | 1 | 0 | 49 | 3 | 53 |
| 18 | 0 | 1 | 0 | 31 | 2 | 34 |
| 19 | 0 | 5 | 1 | 26 | 3 | 35 |
| 20 | 0 | 4 | 2 | 23 | 2 | 31 |
| 21 | 1 | 5 | 0 | 24 | 1 | 31 |
| 22 | 0 | 2 | 0 | 16 | 2 | 20 |
| 23 | 1 | 4 | 0 | 9 | 1 | 15 |
| 24 | 0 | 2 | 0 | 11 | 1 | 14 |
| 25 | 0 | 5 | 1 | 11 | 0 | 17 |
| 26 | 0 | 1 | 1 | 7 | 2 | 11 |
| 27 | 0 | 4 | 0 | 4 | 1 | 9 |
| 28 | 1 | 4 | 0 | 6 | 1 | 12 |
| 29 | 1 | 4 | 0 | 3 | 2 | 10 |
| 30 | 0 | 2 | 0 | 2 | 2 | 6 |
| 31 | 0 | 7 | 0 | 2 | 1 | 10 |
| 32 | 0 | 4 | 0 | 1 | 0 | 5 |
| 33 | 0 | 2 | 0 | 5 | 0 | 7 |
| 34 | 0 | 2 | 0 | 0 | 1 | 3 |
| 35 | 0 | 2 | 0 | 2 | 0 | 4 |
| 36 | 0 | 3 | 1 | 1 | 1 | 6 |
| 37 | 0 | 0 | 0 | 0 | 0 | 0 |
| 38 | 0 | 0 | 0 | 1 | 0 | 1 |
| 39 | 1 | 1 | 0 | 0 | 0 | 2 |
| 40 | 0 | 0 | 0 | 0 | 0 | 0 |
| 41 | 0 | 1 | 0 | 0 | 0 | 1 |
| 42 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 5 | 81 | 237 | 1,079 | 29 | 1,431 |

Table 3.--The distribution of study logs by length and grade

| Length (feet) | Log grade | | | | | |
|----------------------------|-----------|----|-----|-------|----|------------|
| | 1 | 2 | 3 | 4 | 9 | All grades |
| ----- Number of logs ----- | | | | | | |
| 8 | 0 | 0 | 8 | 10 | 0 | 18 |
| 10 | 0 | 0 | 18 | 24 | 1 | 43 |
| 12 | 0 | 5 | 43 | 121 | 2 | 171 |
| 14 | 1 | 2 | 10 | 53 | 2 | 77 |
| 16 | 4 | 72 | 142 | 831 | 23 | 1,072 |
| 18 | 0 | 2 | 7 | 27 | 0 | 36 |
| 20 | 0 | 0 | 1 | 13 | 0 | 14 |
| Total | 5 | 81 | 237 | 1,079 | 29 | 1,431 |

SAWING

The study logs were sawn under normal production conditions with the objective of obtaining the highest value from each log. Logs up to and including 20 feet in length were sawn. Lumber on the green chain did not exceed 16 feet because longer items were cut into two pieces. Shop items were sawn to 5/4-inch thickness and all other items to 4/4-inch.

Production equipment in the sawmill included a double-arbor edger and a 24-foot gang trimmer. A vertical band resaw located outside the mill was used to convert 8/4-inch-thick stock into 1-inch boards.

DRYING AND SURFACING

After the logs were sawn, all study lumber was kiln dried and surfaced according to general industry practices.

LUMBER GRADING AND TALLYING

A Western Wood Products Association grading inspector either graded or supervised the grading of study lumber on the planer chain. All study lumber was graded under the Western Wood Products Association, "Rules for Grading Western Lumber, July 1, 1968."

Each lumber item produced was placed in one of the following grades:

| | |
|------------------------|---------------------------|
| B and Better (Supreme) | No. 2 Shop |
| C Select (Choice) | No. 1 Common (Colonial) |
| D Select (Quality) | No. 2 Common (Sterling) |
| Molding | No. 3 Common (Standard) |
| No. 3 Clear | No. 4 Common (Utility) |
| No. 1 Shop | No. 5 Common (Industrial) |

Each piece of lumber was tallied by its shipping dimensions and grade and by log number.

CUBIC VOLUME: LOGS, CHIPS, AND SAWDUST

In addition to lumber grade and board-foot volume data collected, the cubic volume of logs, lumber, residues, and sawdust was calculated for all study logs.

The gross cubic-foot log volume was computed by the following formula:

$$V = \frac{\pi L (D_s^2 + D_s D_e + D_e^2)}{4 \times 3 \times 144}$$

where

- V = Gross cubic-foot log volume
- D_s = Diameter in inches of small end of log
- D_e = Diameter in inches of large end of log
- L = Log length in feet

The lumber cubic volumes, shown in tables 5-10 of the appendix, are based on actual dimensions of the surfaced dry lumber taken from the planer settings at the time of the study.

The sawdust cubic volumes, also shown in tables 5-10 of the appendix, were calculated by using an average saw kerf of 0.25 inch and the computed surface area of the rough green lumber from each log.

The combined volumetric shrinkage plus the cubic volume of planer shavings was calculated by subtracting the cubic volume of surfaced dry lumber from the cubic volume of rough green lumber.

The residue volume was calculated by subtracting the lumber, sawdust, volumetric shrinkage, and planer shaving volumes from the gross cubic log volume. It includes a small amount of sawdust produced from the production of slabs, edging, and trim ends.

RESULTS

The 1,402 merchantable logs produced 203,053 board feet of lumber. The average weighted recovery of merchantable logs was 122 percent. A significant linear relationship was found between percent recovery and diameter (see fig. 2). As expected, percent recovery decreased with an increase in diameter.

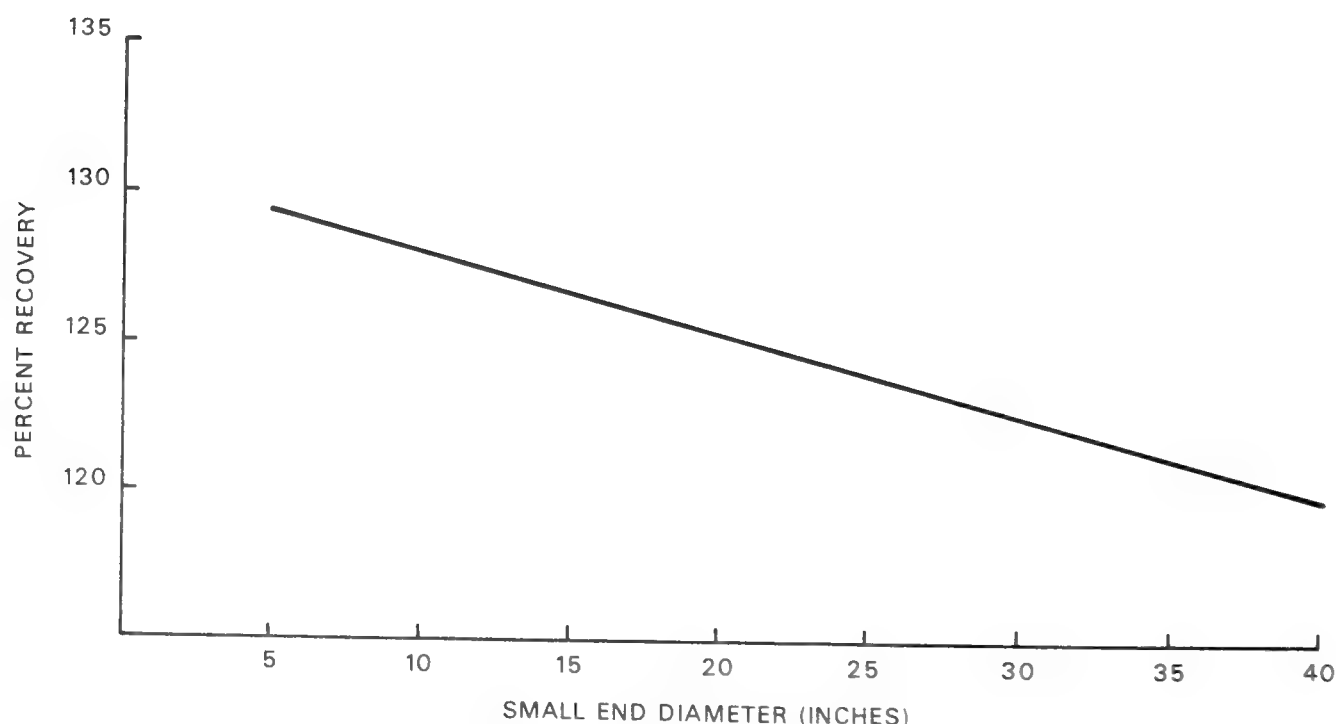


Figure 2.--Percent recovery of all merchantable logs over log scaling diameter.

Detailed lumber yield, chippable residue, and sawdust volume information according to log size and log grade are shown in the appendix (tables 4 through 22). Lumber volume from the study is summarized by thickness, width, and grade in table 4. Eighty-five percent of the lumber volume produced was in 1-inch boards, and 5/4-inch shop items accounted for the remainder of the lumber production. The average lumber grade yield for each log grade is shown in figure 3.

The log scale, lumber tally, and cubic volumes obtained for each log are summarized by scaling diameter and log grade in tables 5 through 10.

The lumber grade yields, by scaling diameter and log grade, are shown in tables 11 through 16. Tables 17 through 22 show lumber grade recovery as a percentage of lumber tally volume by 1-inch diameter class and log grade. Curves of that lumber grade recovery are shown in figures 4, 5, and 6. Because of insufficient data at the extremes, the curves were not extended through the entire diameter range of the logs.

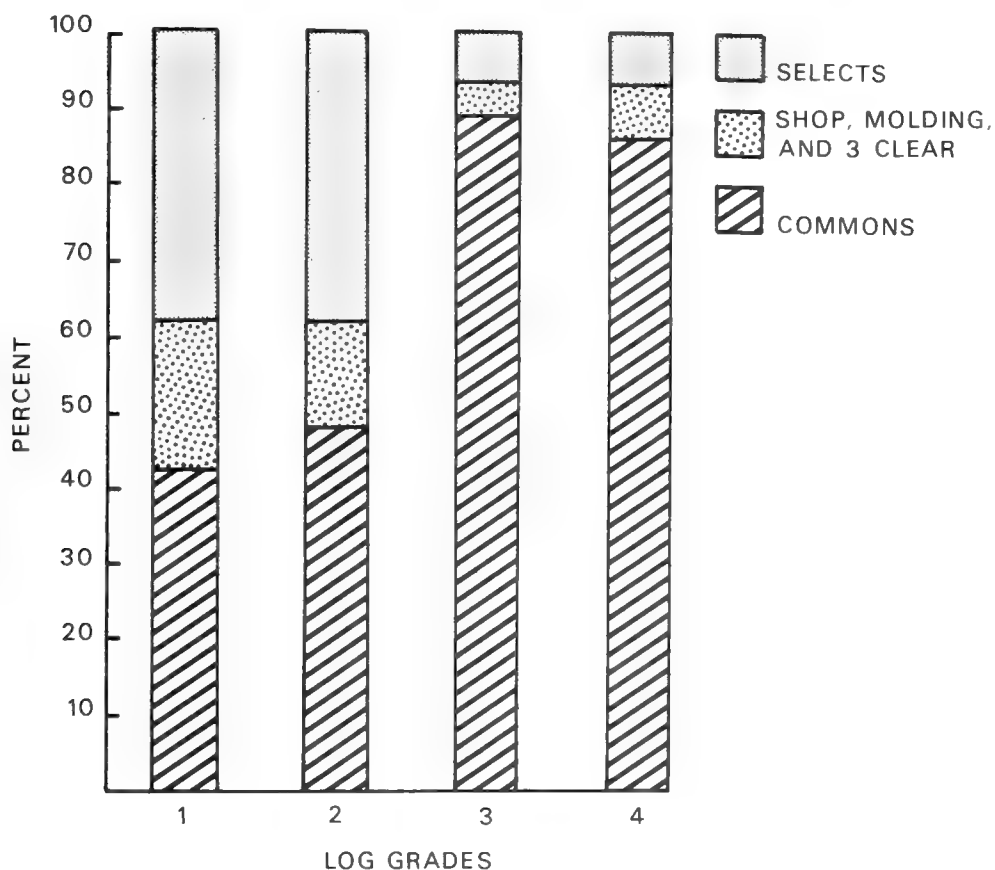


Figure 3.--Lumber grade yield expressed as a percent of the total volume for each log grade. (Includes 29 cull logs.)

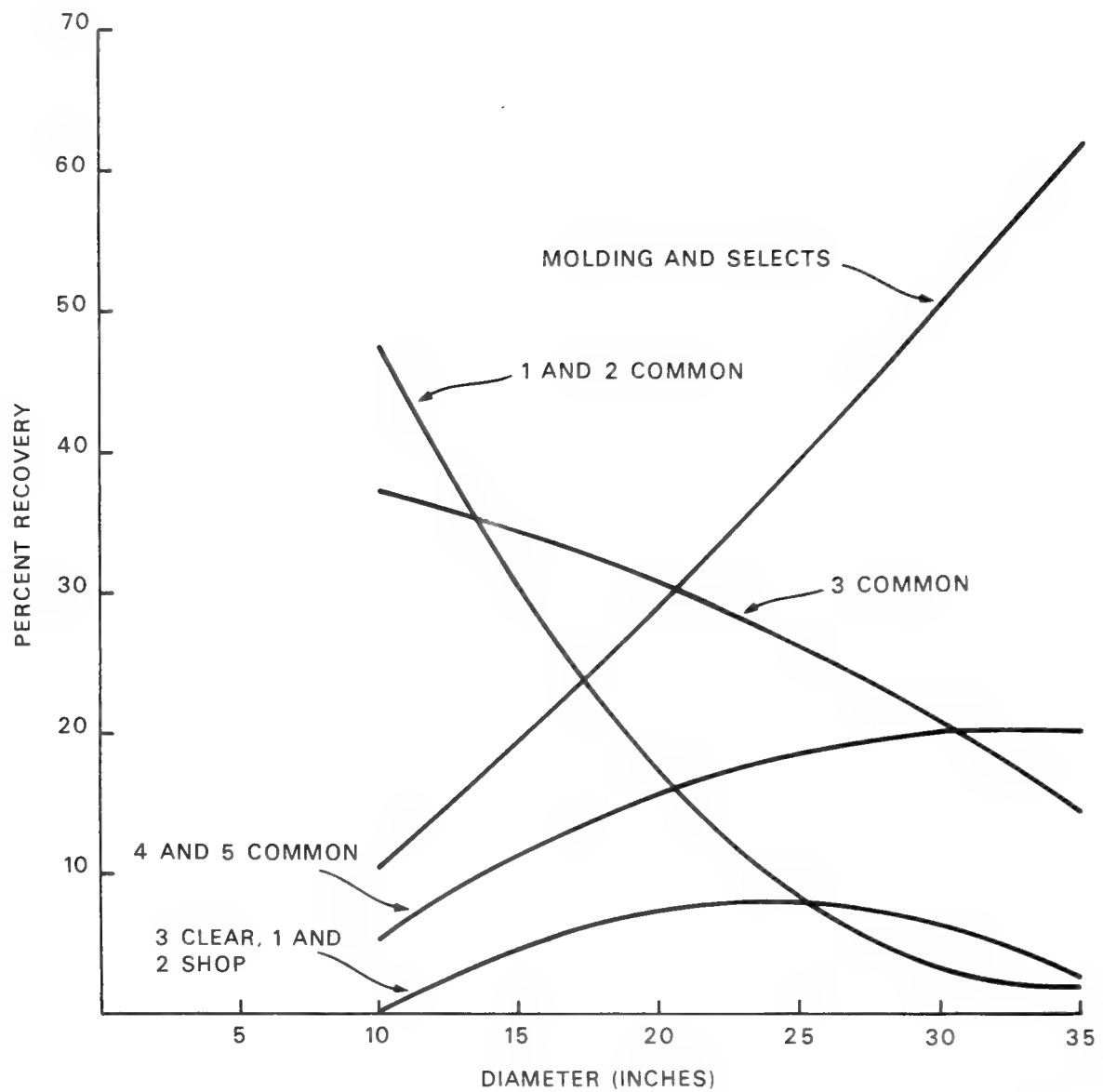


Figure 4.--Lumber recovery expressed as a percent of lumber tally volume over diameter--log grade 2.

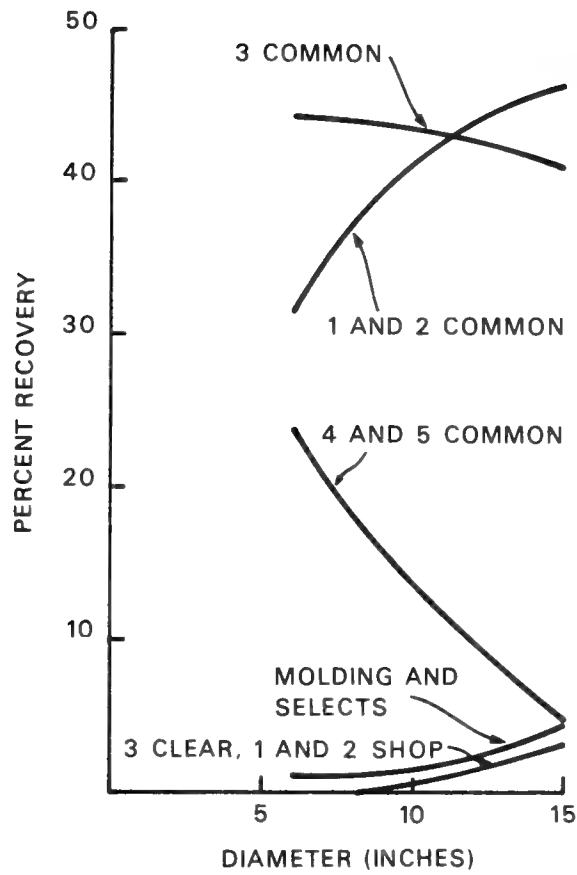


Figure 5.--Lumber recovery expressed as a percent of lumber tally volume over diameter--log grade 3.

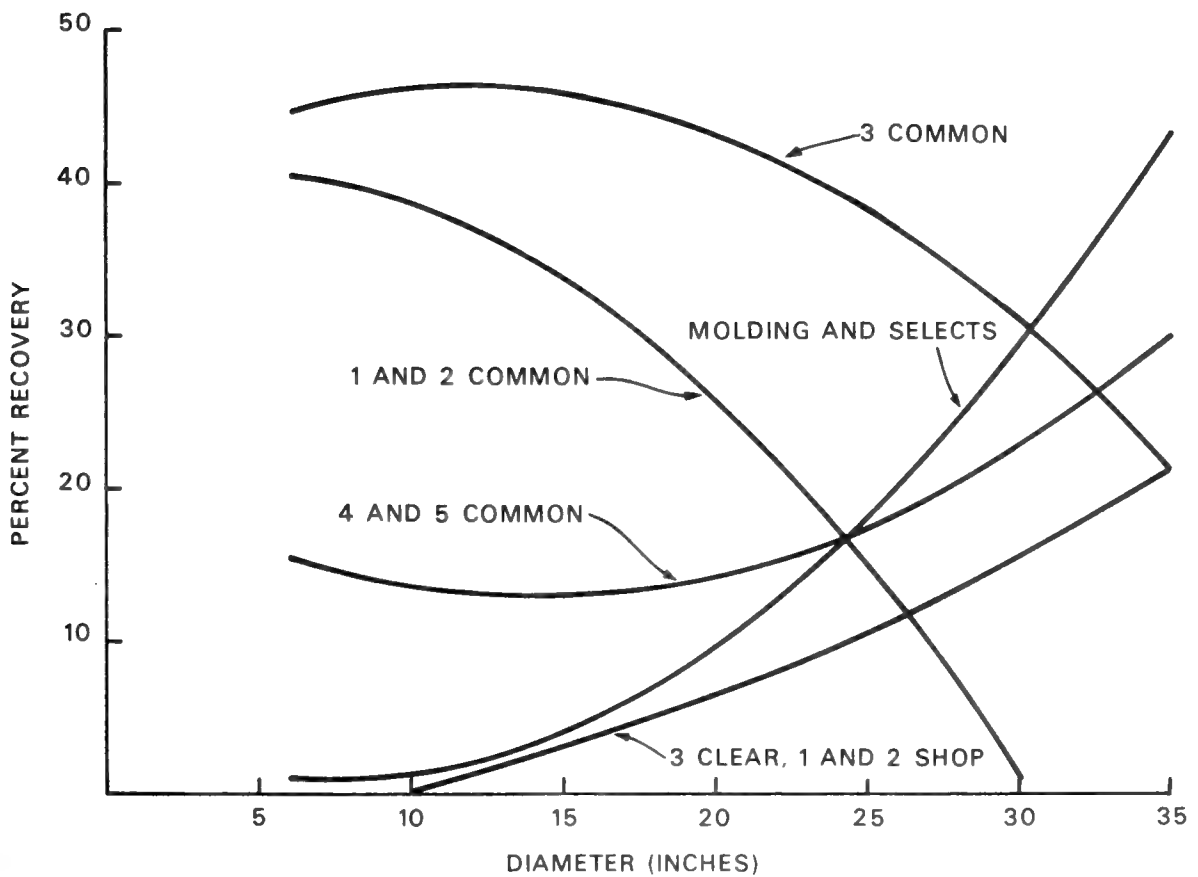


Figure 6.--Lumber recovery expressed as a percent of lumber tally volume over diameter--log grade 4.

APPENDIX

TABLES OF LUMBER RECOVERY DATA BY DIAMETER AND LOG GRADE

Table 4.--Percent of lumber tally by thickness, width, and lumber grade^{1/}

| Width (inches) | Volume | Lumber grade | | | | | | | | | | | Total | |
|------------------------------|---------|--------------------|-------------|-------------|---------|----------------|---------------|---------------|-----------------|-----------------|-----------------|-----------------|-------|-----------------|
| | | B & Btr. Select | C Select | D Select | Molding | No. 3 Clear | No. 1 Shop | No. 2 Shop | No. 1 Common | No. 2 Common | No. 3 Common | No. 4 Common | | No. 5 Common |
| Board feet | | | | | | | | | | | | | | |
| Percentage of lumber tally | | | | | | | | | | | | | | |
| 1 inch thick: | | | | | | | | | | | | | | |
| 4 | 12,121 | 0.08 | 0.33 | 0.59 | 0.30 | 0 | 0 | 0 | 0.08 | 0.97 | 2.15 | 0.97 | 0.23 | 5.70 |
| 6 | 47,605 | .26 | .99 | 1.90 | .51 | .13 | .35 | .26 | .20 | 2.90 | 7.26 | 4.64 | 2.99 | 22.39 |
| 8 | 31,759 | .05 | .41 | .56 | .29 | .17 | .23 | .15 | .20 | 4.87 | 6.52 | 1.41 | .06 | 14.92 |
| 10 | 25,453 | .09 | .29 | .79 | .25 | .56 | .58 | .29 | .16 | 3.41 | 4.52 | 1.00 | .01 | 11.95 |
| 12 | 63,814 | .20 | .77 | 1.81 | .83 | 1.07 | 1.02 | .51 | .55 | 5.83 | 13.23 | 4.08 | .12 | 30.02 |
| Total | 180,752 | .68 | 2.79 | 5.65 | 2.18 | 1.93 | 2.18 | 1.21 | 1.19 | 17.98 | 33.68 | 12.10 | 3.41 | 84.98 |
| 1-1/4 (5/4) inches thick: | | | | | | | | | | | | | | |
| 4 | 2,044 | .10 | .23 | .13 | .15 | (2/) | (2/) | (2/) | .02 | .17 | .10 | .05 | .02 | .97 |
| 6 | 5,152 | .16 | .30 | .27 | .04 | (2/) | (2/) | (2/) | .06 | .79 | .64 | .15 | 0 | 2.41 |
| 8 | 4,636 | .07 | .19 | .13 | .02 | (2/) | (2/) | (2/) | .05 | .76 | .56 | .40 | .01 | 2.19 |
| 10 | 6,222 | .12 | .25 | .45 | .27 | (2/) | (2/) | (2/) | .04 | .66 | .66 | .45 | .02 | 2.92 |
| 12 | 13,897 | .37 | .81 | 1.07 | .43 | (2/) | (2/) | (2/) | .03 | 1.05 | 1.97 | .80 | .00 | 6.53 |
| Total | 31,951 | .82 | 1.78 | 2.05 | .91 | (2/) | (2/) | (2/) | .20 | 3.43 | 3.93 | 1.85 | .05 | 15.02 |
| Total | 212,703 | 1.50 | 4.57 | 7.70 | 3.09 | 1.93 | 2.18 | 1.21 | 1.39 | 21.41 | 37.61 | 13.95 | 3.46 | 100.00 |

^{1/} Includes 29 cull logs.^{2/} The cooperating mill chose not to produce any of these items for this study.

Table 5.--Log scale, lumber tally, and cubic volumes by scaling diameter for grade 1 logs

| Log scaling diameter (inches) | Number of logs | Log scale | | Lumber tally | | Cubic volume | | | | | | Residue |
|-------------------------------|----------------|------------|-------|--------------|----------------|--------------|--------------------|-----------------------|---------------|--|--------|---------|
| | | Gross | Net | Volume | Recovery ratio | Log | Surface dry lumber | Lumber recovery ratio | Green sawdust | Volumetric shrinkage and planer shavings | | |
| | | Board feet | | Percent | | Cubic feet | | Percent | | Cubic feet | | |
| 21 | 1 | 300 | 190 | 227 | 119 | 58.77 | 13.91 | 24 | 5.48 | 6.06 | 33.32 | |
| 22 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 23 | 1 | 380 | 350 | 405 | 116 | 51.24 | 26.82 | 52 | 8.98 | 10.03 | 5.41 | |
| 24 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 25 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 26 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 27 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 28 | 1 | 510 | 300 | 435 | 145 | 64.69 | 26.21 | 41 | 10.74 | 12.14 | 15.60 | |
| 29 | 1 | 610 | 560 | 615 | 110 | 80.53 | 39.66 | 49 | 14.17 | 15.92 | 10.78 | |
| 30 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 31 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 32 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 33 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 34 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 35 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 36 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 37 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 38 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 39 | 1 | 1,120 | 730 | 860 | 118 | 149.47 | 56.66 | 38 | 19.43 | 20.65 | 52.73 | |
| Total | 5 | 2,920 | 2,130 | 2,542 | 119 | 404.70 | 163.26 | 40 | 58.80 | 64.80 | 117.84 | |

Table 6.--Log scale, lumber tally, and cubic volumes by scaling diameter for grade 2 logs

| Log scaling diameter (inches) | Number of logs | Log scale | | Lumber tally | | Cubic volume | | | | | | Residue |
|--|----------------|-----------|--------|--------------|----------------|--------------|--------------------|-----------------------|---------------|--|----------|---------|
| | | Gross | Net | Volume | Recovery ratio | Log | Surface dry lumber | Lumber recovery ratio | Green sawdust | Volumetric shrinkage and planer shavings | | |
| ----- Board feet ----- Percent ----- Cubic feet ----- Percent ----- Cubic feet ----- | | | | | | | | | | | | |
| 8 | 1 | 30 | 30 | 39 | 130 | 6.51 | 2.33 | 36 | 1.01 | 1.09 | 2.08 | |
| 9 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 10 | 1 | 60 | 50 | 62 | 124 | 13.82 | 3.66 | 26 | 1.52 | 1.69 | 6.95 | |
| 11 | 3 | 210 | 200 | 215 | 107 | 48.83 | 13.40 | 27 | 5.12 | 5.61 | 24.70 | |
| 12 | 3 | 240 | 220 | 316 | 144 | 58.12 | 19.31 | 33 | 7.77 | 8.58 | 22.46 | |
| 13 | 2 | 200 | 150 | 207 | 138 | 45.54 | 12.75 | 28 | 5.02 | 5.63 | 22.14 | |
| 14 | 2 | 220 | 140 | 259 | 185 | 40.80 | 15.94 | 39 | 6.29 | 6.93 | 11.64 | |
| 15 | 1 | 140 | 140 | 170 | 121 | 21.76 | 10.74 | 49 | 3.89 | 4.30 | 2.83 | |
| 16 | 2 | 320 | 310 | 350 | 113 | 62.94 | 22.42 | 36 | 8.10 | 9.19 | 23.23 | |
| 17 | 1 | 180 | 180 | 223 | 124 | 27.57 | 14.24 | 52 | 5.24 | 5.98 | 2.11 | |
| 18 | 1 | 210 | 180 | 165 | 92 | 52.60 | 9.90 | 19 | 4.19 | 4.52 | 33.99 | |
| 19 | 5 | 1,200 | 1,050 | 1,359 | 129 | 234.20 | 84.66 | 36 | 32.44 | 36.93 | 80.17 | |
| 20 | 4 | 1,080 | 1,080 | 1,199 | 111 | 164.75 | 77.33 | 47 | 27.42 | 31.15 | 28.85 | |
| 21 | 5 | 1,500 | 1,360 | 1,629 | 120 | 246.84 | 103.23 | 42 | 38.30 | 43.80 | 61.51 | |
| 22 | 2 | 660 | 640 | 752 | 117 | 108.96 | 47.64 | 44 | 17.70 | 20.26 | 23.36 | |
| 23 | 4 | 1,520 | 1,220 | 1,675 | 137 | 241.37 | 107.24 | 44 | 38.89 | 44.07 | 51.17 | |
| 24 | 2 | 800 | 750 | 905 | 121 | 138.69 | 58.05 | 42 | 20.95 | 23.61 | 36.08 | |
| 25 | 5 | 2,240 | 1,750 | 2,050 | 117 | 349.74 | 130.74 | 37 | 47.70 | 53.55 | 117.75 | |
| 26 | 1 | 560 | 560 | 587 | 105 | 73.99 | 37.86 | 51 | 13.57 | 15.17 | 7.39 | |
| 27 | 4 | 2,060 | 1,500 | 1,684 | 112 | 289.81 | 108.70 | 37 | 38.91 | 43.00 | 99.20 | |
| 28 | 4 | 2,180 | 1,540 | 2,009 | 130 | 302.46 | 127.95 | 42 | 47.04 | 52.61 | 74.86 | |
| 29 | 4 | 2,290 | 2,020 | 2,191 | 108 | 300.64 | 140.00 | 47 | 51.23 | 57.50 | 51.91 | |
| 30 | 2 | 1,150 | 840 | 1,085 | 129 | 151.52 | 71.00 | 47 | 24.68 | 26.96 | 28.88 | |
| 31 | 7 | 4,790 | 3,010 | 4,614 | 153 | 726.70 | 289.93 | 40 | 109.26 | 122.02 | 205.49 | |
| 32 | 4 | 3,050 | 2,330 | 3,079 | 132 | 453.50 | 197.65 | 44 | 71.69 | 79.54 | 104.62 | |
| 33 | 2 | 1,560 | 1,300 | 1,737 | 134 | 217.61 | 114.88 | 53 | 39.11 | 42.97 | 20.65 | |
| 34 | 2 | 1,600 | 1,400 | 1,598 | 114 | 219.87 | 102.11 | 46 | 37.30 | 41.57 | 38.89 | |
| 35 | 2 | 1,760 | 1,600 | 1,803 | 113 | 323.46 | 116.13 | 36 | 41.66 | 46.24 | 119.43 | |
| 36 | 3 | 2,760 | 1,690 | 2,591 | 153 | 491.88 | 161.36 | 33 | 62.19 | 68.92 | 199.41 | |
| 37 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 38 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 39 | 1 | 1,120 | 1,100 | 1,195 | 109 | 147.68 | 78.29 | 53 | 27.12 | 29.85 | 12.42 | |
| 40 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 41 | 1 | 1,270 | 1,120 | 1,176 | 105 | 232.12 | 78.95 | 34 | 25.99 | 27.98 | 99.20 | |
| Total | 81 | 36,960 | 29,460 | 36,924 | 125 | 5,794.28 | 2,358.39 | 41 | 861.30 | 961.22 | 1,613.37 | |

Table 7.--Log scale, lumber tally, and cubic volumes by scaling diameter for grade 3 logs

| Log scaling diameter (inches) | Number of logs | Log scale | | Lumber tally | | Cubic volume | | | | | | Residue |
|--|----------------|-----------|--------|--------------|----------------|--------------|--------------------|-----------------------|---------------|--|--------|---------|
| | | Gross | Net | Volume | Recovery ratio | Log | Surface dry lumber | Lumber recovery ratio | Green sawdust | Volumetric shrinkage and planer shavings | | |
| - - - - - Board feet - - - - - Percent - - - - - Cubic feet - - - - - Cubic feet - - - - - | | | | | | | | | | | | |
| 4 | 1 | 10 | 10 | 14 | 140 | 3.42 | 0.79 | 23 | 0.35 | 0.36 | 1.92 | |
| 5 | 4 | 40 | 40 | 61 | 152 | 14.53 | 3.63 | 25 | 1.57 | 1.59 | 7.74 | |
| 6 | 26 | 400 | 350 | 489 | 140 | 109.48 | 29.04 | 27 | 12.65 | 13.16 | 54.63 | |
| 7 | 60 | 1,420 | 1,400 | 1,657 | 118 | 309.67 | 99.34 | 32 | 42.18 | 45.36 | 122.79 | |
| 8 | 46 | 1,190 | 1,180 | 1,594 | 135 | 301.01 | 97.30 | 32 | 39.10 | 42.27 | 122.34 | |
| 9 | 29 | 1,040 | 1,010 | 1,287 | 127 | 228.44 | 79.41 | 35 | 31.33 | 34.31 | 83.39 | |
| 10 | 30 | 1,560 | 1,550 | 1,897 | 122 | 304.35 | 118.49 | 39 | 45.47 | 50.14 | 90.25 | |
| 11 | 12 | 750 | 740 | 915 | 124 | 144.92 | 57.10 | 39 | 22.04 | 24.33 | 41.45 | |
| 12 | 10 | 750 | 750 | 955 | 127 | 143.95 | 59.61 | 41 | 22.77 | 25.20 | 36.37 | |
| 13 | 6 | 580 | 560 | 720 | 129 | 116.76 | 44.73 | 38 | 17.24 | 19.30 | 35.49 | |
| 14 | 4 | 440 | 440 | 577 | 131 | 78.72 | 36.70 | 47 | 13.47 | 14.99 | 13.56 | |
| 15 | 2 | 250 | 250 | 293 | 117 | 40.55 | 18.36 | 45 | 7.04 | 7.94 | 7.21 | |
| 16 | 1 | 160 | 150 | 204 | 136 | 24.66 | 12.98 | 53 | 4.71 | 5.37 | 1.60 | |
| 17 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 18 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 19 | 1 | 240 | 240 | 292 | 122 | 35.81 | 18.67 | 52 | 6.76 | 7.70 | 2.68 | |
| 20 | 2 | 560 | 500 | 598 | 120 | 81.88 | 37.86 | 46 | 14.09 | 16.07 | 13.86 | |
| 21 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 22 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 23 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 24 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 25 | 1 | 340 | 310 | 360 | 116 | 44.69 | 23.12 | 52 | 8.37 | 9.50 | 3.70 | |
| 26 | 1 | 500 | 470 | 501 | 107 | 65.64 | 31.96 | 49 | 11.63 | 13.31 | 8.74 | |
| 27 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 28 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 29 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 30 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 31 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 32 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 33 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 34 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 35 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 36 | 1 | 920 | 850 | 1,017 | 120 | 126.62 | 67.45 | 53 | 22.80 | 24.70 | 11.67 | |
| Total | 237 | 11,150 | 10,800 | 13,431 | 124 | 2,175.10 | 836.54 | 38 | 323.57 | 355.60 | 659.39 | |

Table 8.--Log scale, lumber tally, and cubic volumes by scaling diameter for grade 4 logs

| Log scaling diameter (inches) | Log scale | | Lumber tally | | Cubic volume | | | | | Residue | | |
|-------------------------------|------------|---------|--------------|----------------|--------------|--------------------|-----------------------|---------------|--|----------|------------|--|
| | Gross | Net | Volume | Recovery ratio | Log | Surface dry lumber | Lumber recovery ratio | Green sawdust | Volumetric shrinkage and planer shavings | | | |
| | Board feet | | Percent | | Cubic feet | | | | | Percent | Cubic feet | |
| 5 | 10 | 10 | 16 | 160 | 3.87 | 0.94 | 24 | 0.42 | 0.44 | 2.07 | | |
| 6 | 240 | 240 | 265 | 110 | 60.61 | 15.70 | 26 | 6.93 | 7.22 | 30.76 | | |
| 7 | 1,480 | 1,450 | 1,637 | 113 | 311.30 | 98.13 | 32 | 41.48 | 44.68 | 127.01 | | |
| 8 | 2,200 | 2,130 | 2,964 | 139 | 548.74 | 179.85 | 33 | 73.64 | 80.06 | 215.19 | | |
| 9 | 4,270 | 4,130 | 5,396 | 131 | 974.07 | 331.13 | 34 | 131.53 | 143.68 | 367.73 | | |
| 10 | 6,030 | 5,800 | 6,649 | 115 | 1,202.62 | 412.14 | 34 | 160.79 | 177.47 | 452.22 | | |
| 11 | 6,880 | 6,590 | 8,660 | 131 | 1,392.23 | 538.70 | 39 | 207.77 | 228.99 | 416.77 | | |
| 12 | 7,460 | 7,260 | 9,401 | 129 | 1,482.89 | 587.37 | 40 | 224.75 | 248.49 | 422.28 | | |
| 13 | 8,200 | 7,810 | 9,726 | 125 | 1,561.54 | 608.92 | 39 | 231.15 | 256.51 | 464.96 | | |
| 14 | 8,120 | 7,910 | 10,200 | 129 | 1,631.52 | 642.09 | 39 | 240.68 | 268.53 | 480.22 | | |
| 15 | 8,860 | 8,550 | 10,272 | 120 | 1,573.58 | 645.86 | 41 | 242.08 | 272.47 | 413.17 | | |
| 16 | 7,280 | 6,900 | 8,580 | 124 | 1,294.73 | 539.79 | 42 | 202.65 | 230.55 | 321.74 | | |
| 17 | 8,640 | 8,040 | 10,197 | 127 | 1,454.99 | 644.02 | 44 | 239.64 | 273.99 | 297.34 | | |
| 18 | 6,340 | 6,170 | 7,550 | 122 | 1,023.15 | 477.51 | 47 | 177.25 | 203.19 | 165.20 | | |
| 19 | 5,970 | 5,600 | 6,450 | 115 | 932.86 | 408.17 | 44 | 151.48 | 173.18 | 200.03 | | |
| 20 | 6,120 | 5,790 | 6,616 | 114 | 909.90 | 417.35 | 46 | 156.20 | 178.82 | 157.53 | | |
| 21 | 6,900 | 6,250 | 7,459 | 119 | 1,061.03 | 469.47 | 44 | 176.12 | 201.68 | 213.76 | | |
| 22 | 5,210 | 4,550 | 5,464 | 120 | 795.14 | 343.55 | 43 | 129.64 | 148.06 | 173.89 | | |
| 23 | 3,170 | 2,940 | 3,160 | 107 | 454.31 | 197.44 | 43 | 75.16 | 86.78 | 94.93 | | |
| 24 | 4,250 | 3,940 | 4,602 | 117 | 621.95 | 291.70 | 47 | 108.13 | 123.32 | 98.80 | | |
| 25 | 4,460 | 3,500 | 4,366 | 125 | 621.50 | 273.31 | 44 | 103.79 | 117.18 | 127.22 | | |
| 26 | 3,110 | 2,900 | 3,197 | 110 | 413.33 | 200.70 | 49 | 75.85 | 86.84 | 49.94 | | |
| 27 | 1,850 | 1,340 | 1,598 | 119 | 242.12 | 102.52 | 42 | 37.05 | 41.13 | 61.42 | | |
| 28 | 3,340 | 3,170 | 3,477 | 110 | 437.28 | 217.18 | 50 | 82.76 | 94.60 | 42.74 | | |
| 29 | 1,600 | 1,400 | 1,690 | 121 | 216.55 | 107.63 | 50 | 39.26 | 44.47 | 25.19 | | |
| 30 | 1,230 | 1,140 | 1,215 | 107 | 170.61 | 75.42 | 44 | 29.18 | 33.24 | 32.77 | | |
| 31 | 1,240 | 1,070 | 1,177 | 110 | 160.29 | 74.14 | 46 | 27.81 | 31.44 | 26.90 | | |
| 32 | 740 | 710 | 660 | 93 | 101.06 | 42.29 | 42 | 15.34 | 17.41 | 26.02 | | |
| 33 | 3,710 | 3,220 | 3,702 | 115 | 487.88 | 232.49 | 48 | 87.97 | 98.76 | 68.66 | | |
| 34 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | |
| 35 | 1,760 | 1,580 | 1,817 | 115 | 230.28 | 113.57 | 49 | 43.38 | 48.98 | 24.35 | | |
| 36 | 920 | 910 | 933 | 103 | 123.98 | 59.09 | 48 | 21.87 | 24.79 | 18.23 | | |
| 37 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | |
| 38 | 1,070 | 1,060 | 1,060 | 100 | 135.02 | 67.55 | 50 | 24.75 | 27.67 | 15.05 | | |
| Total | 1,079 | 132,660 | 124,060 | 150,156 | 121 | 22,630.93 | 9,415.72 | 42 | 3,566.50 | 4,014.62 | 5,634.09 | |

Table 9.--Log scale, lumber tally, and cubic volumes by scaling diameter for grade 9 logs

| Log scaling diameter (inches) | Number of logs | Log scale | | Lumber tally | | Cubic volume | | | | | | Residue | | | |
|-------------------------------|----------------|------------|-------|--------------|----------------|--------------|--------------------|-----------------------|---------------|--|--------|---------|------------|--|--|
| | | Gross | Net | Volume | Recovery ratio | Log | Surface dry lumber | Lumber recovery ratio | Green sawdust | Volumetric shrinkage and planer shavings | | | | | |
| | | Board feet | | | Percent | | Cubic feet | | | Percent | | | Cubic feet | | |
| 12 | 1 | 80 | 20 | 63 | 315 | 17.97 | 3.82 | 21 | 1.59 | 1.77 | 10.79 | | | | |
| 13 | 1 | 100 | 0 | 123 | -- | 16.51 | 7.46 | 45 | 3.02 | 3.40 | 2.63 | | | | |
| 14 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | | | |
| 15 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | | | |
| 16 | 1 | 120 | 30 | 132 | 440 | 18.86 | 8.13 | 43 | 3.22 | 3.68 | 3.83 | | | | |
| 17 | 3 | 540 | 90 | 553 | 614 | 88.63 | 33.21 | 37 | 13.74 | 15.44 | 26.24 | | | | |
| 18 | 2 | 420 | 0 | 493 | -- | 81.95 | 29.94 | 37 | 12.11 | 13.68 | 26.22 | | | | |
| 19 | 3 | 720 | 120 | 605 | 504 | 118.70 | 37.20 | 31 | 14.80 | 16.79 | 49.91 | | | | |
| 20 | 2 | 450 | 70 | 406 | 580 | 66.22 | 24.93 | 37 | 10.15 | 11.35 | 20.33 | | | | |
| 21 | 1 | 300 | 80 | 230 | 288 | 51.79 | 13.86 | 27 | 5.67 | 6.41 | 25.85 | | | | |
| 22 | 2 | 660 | 120 | 631 | 526 | 111.24 | 38.26 | 34 | 15.48 | 17.60 | 39.90 | | | | |
| 23 | 1 | 380 | 0 | 347 | -- | 47.61 | 20.86 | 44 | 8.67 | 9.72 | 8.36 | | | | |
| 24 | 1 | 400 | 0 | 323 | -- | 60.22 | 19.25 | 32 | 8.13 | 9.03 | 23.81 | | | | |
| 25 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | | | |
| 26 | 2 | 1,000 | 0 | 860 | -- | 128.45 | 52.20 | 41 | 21.14 | 23.87 | 31.24 | | | | |
| 27 | 1 | 550 | 0 | 435 | -- | 88.02 | 26.03 | 30 | 10.93 | 12.19 | 38.87 | | | | |
| 28 | 1 | 580 | 140 | 378 | 270 | 76.17 | 22.68 | 30 | 9.44 | 10.60 | 33.45 | | | | |
| 29 | 2 | 1,140 | 260 | 902 | 347 | 172.73 | 54.94 | 32 | 22.13 | 24.78 | 70.88 | | | | |
| 30 | 2 | 1,140 | 320 | 1,084 | 339 | 154.68 | 66.84 | 43 | 26.21 | 29.42 | 32.21 | | | | |
| 31 | 1 | 530 | 0 | 392 | -- | 69.28 | 24.31 | 35 | 9.45 | 10.46 | 25.06 | | | | |
| 32 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | | | |
| 33 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | | | |
| 34 | 1 | 800 | 200 | 656 | 328 | 114.86 | 39.39 | 34 | 16.38 | 18.39 | 40.70 | | | | |
| 35 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | | | |
| 36 | 1 | 920 | 0 | 1,037 | -- | 164.67 | 63.20 | 38 | 25.46 | 28.76 | 47.25 | | | | |
| Total | 29 | 10,830 | 1,450 | 9,650 | 666 | 1,648.56 | 585.97 | 36 | 237.72 | 267.34 | 557.53 | | | | |

Table 10.--Log scale, lumber tally, and cubic volumes by scaling diameter for all log grades

| Log scaling diameter (inches) | Number of logs | Log scale | | Lumber tally | | Cubic volume | | | | | Residue |
|-------------------------------|----------------|------------|---------|--------------|----------------|--------------|--------------------|-----------------------|---------------|--|----------|
| | | Gross | Net | Volume | Recovery ratio | Log | Surface dry lumber | Lumber recovery ratio | Green sawdust | Volumetric shrinkage and planer shavings | |
| | | Board feet | | | Percent | Cubic feet | | Percent | | Cubic feet | |
| 4 | 1 | 10 | 10 | 14 | 140 | 3.42 | 0.79 | 23 | 0.35 | 0.36 | 1.92 |
| 5 | 5 | 50 | 50 | 77 | 154 | 18.40 | 4.57 | 25 | 1.99 | 2.03 | 9.81 |
| 6 | 40 | 640 | 590 | 754 | 128 | 170.09 | 44.74 | 26 | 19.58 | 20.38 | 85.39 |
| 7 | 115 | 2,900 | 2,850 | 3,294 | 116 | 620.97 | 197.47 | 32 | 83.66 | 90.04 | 249.80 |
| 8 | 127 | 3,420 | 3,340 | 4,597 | 138 | 856.26 | 279.48 | 33 | 113.75 | 123.42 | 339.61 |
| 9 | 142 | 5,310 | 5,140 | 6,683 | 130 | 1,202.51 | 410.54 | 34 | 162.86 | 177.99 | 451.12 |
| 10 | 139 | 7,650 | 7,400 | 8,608 | 116 | 1,520.79 | 534.29 | 35 | 207.78 | 229.30 | 549.42 |
| 11 | 119 | 7,840 | 7,530 | 9,790 | 130 | 1,585.98 | 609.20 | 38 | 234.93 | 258.93 | 482.92 |
| 12 | 110 | 8,530 | 8,250 | 10,735 | 130 | 1,702.93 | 670.11 | 39 | 256.88 | 284.04 | 491.90 |
| 13 | 94 | 9,080 | 8,520 | 10,776 | 126 | 1,740.35 | 673.86 | 39 | 256.43 | 284.84 | 525.22 |
| 14 | 83 | 8,780 | 8,490 | 11,036 | 130 | 1,751.04 | 694.73 | 40 | 260.41 | 290.45 | 505.42 |
| 15 | 68 | 9,250 | 8,940 | 10,735 | 120 | 1,635.89 | 674.96 | 41 | 253.01 | 284.71 | 423.21 |
| 16 | 51 | 7,880 | 7,390 | 9,266 | 125 | 1,401.19 | 583.32 | 42 | 218.68 | 248.79 | 350.40 |
| 17 | 53 | 9,360 | 8,310 | 10,973 | 132 | 1,571.19 | 691.47 | 44 | 258.62 | 295.41 | 325.69 |
| 18 | 34 | 6,970 | 6,350 | 8,208 | 129 | 1,157.70 | 517.35 | 45 | 193.55 | 221.39 | 225.41 |
| 19 | 35 | 8,130 | 7,010 | 8,706 | 124 | 1,321.57 | 548.70 | 42 | 205.48 | 234.60 | 332.79 |
| 20 | 31 | 8,210 | 7,440 | 9,819 | 119 | 1,222.75 | 556.93 | 46 | 207.86 | 237.39 | 220.57 |
| 21 | 31 | 9,000 | 7,880 | 9,545 | 121 | 1,418.43 | 600.47 | 42 | 225.57 | 257.95 | 334.44 |
| 22 | 20 | 6,530 | 5,310 | 6,847 | 129 | 1,015.34 | 429.45 | 42 | 162.82 | 185.92 | 237.15 |
| 23 | 15 | 5,450 | 4,510 | 5,587 | 124 | 794.53 | 352.36 | 44 | 131.70 | 150.60 | 159.87 |
| 24 | 14 | 5,450 | 4,690 | 5,830 | 122 | 820.86 | 369.00 | 45 | 137.21 | 155.96 | 158.69 |
| 25 | 17 | 7,040 | 5,560 | 6,776 | 122 | 1,015.93 | 427.17 | 42 | 159.86 | 180.23 | 248.67 |
| 26 | 11 | 5,170 | 3,930 | 5,145 | 131 | 681.41 | 322.72 | 47 | 122.19 | 139.19 | 97.31 |
| 27 | 9 | 4,460 | 2,840 | 3,717 | 131 | 619.95 | 237.25 | 38 | 86.89 | 96.32 | 199.49 |
| 28 | 12 | 6,610 | 5,150 | 6,299 | 122 | 880.60 | 394.02 | 45 | 149.98 | 169.95 | 166.65 |
| 29 | 10 | 5,640 | 4,240 | 5,398 | 127 | 770.45 | 342.23 | 44 | 126.79 | 142.67 | 158.76 |
| 30 | 6 | 3,520 | 2,300 | 3,384 | 147 | 476.81 | 213.26 | 45 | 80.07 | 89.62 | 93.86 |
| 31 | 10 | 6,560 | 4,080 | 6,183 | 152 | 956.27 | 388.38 | 41 | 146.52 | 163.92 | 257.45 |
| 32 | 5 | 3,790 | 3,040 | 3,739 | 123 | 554.56 | 239.94 | 43 | 87.03 | 96.95 | 130.64 |
| 33 | 7 | 5,270 | 4,520 | 5,439 | 120 | 705.49 | 347.37 | 49 | 127.08 | 141.73 | 89.31 |
| 34 | 3 | 2,400 | 1,600 | 2,254 | 141 | 334.73 | 141.50 | 42 | 53.68 | 59.96 | 79.59 |
| 35 | 4 | 3,520 | 3,180 | 3,620 | 114 | 553.74 | 229.70 | 41 | 85.04 | 95.22 | 143.78 |
| 36 | 6 | 5,520 | 3,450 | 5,578 | 162 | 907.15 | 351.10 | 39 | 132.32 | 147.17 | 276.56 |
| 37 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 38 | 1 | 1,070 | 1,060 | 1,060 | 100 | 135.02 | 67.55 | 50 | 24.75 | 27.67 | 15.05 |
| 39 | 2 | 2,240 | 1,830 | 2,055 | 112 | 297.15 | 134.95 | 45 | 46.55 | 50.50 | 65.15 |
| 40 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 41 | 1 | 1,270 | 1,120 | 1,176 | 105 | 232.12 | 78.95 | 34 | 25.99 | 27.98 | 99.20 |
| Total | 1,431 | 194,520 | 167,900 | 212,703 | 127 | 32,653.57 | 13,359.88 | 41 | 5,047.89 | 5,663.58 | 8,582.22 |

Table 11.--Lumber tally volume by 1-inch diameter class for log grade 1

| Log scaling diameter (inches) | Number of logs | Total lumber tally volume | B & Btr. Select | C Select | D Select | Molding | No. 3 Clear | No. 1 Shop | No. 2 Shop | No. 1 Common | No. 2 Common | No. 3 Common | No. 4 Common | No. 5 Common |
|--|----------------------|------------------------------|--------------------|-------------|-------------|---------|----------------|---------------|---------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| <i>Board feet</i> | | | | | | | | | | | | | | |
| 21 | 1 | 227 | 10 | 70 | 10 | 44 | 0 | 0 | 0 | 8 | 8 | 8 | 19 | 50 |
| 22 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 23 | 1 | 405 | 0 | 42 | 61 | 32 | 11 | 0 | 0 | 45 | 104 | 90 | 20 | 0 |
| 24 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 26 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 27 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 28 | 1 | 435 | 6 | 5 | 43 | 0 | 26 | 28 | 32 | 0 | 0 | 93 | 133 | 69 |
| 29 | 1 | 615 | 0 | 42 | 90 | 74 | 48 | 30 | 48 | 0 | 4 | 74 | 205 | 0 |
| 30 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 31 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 32 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 33 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 34 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 35 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 36 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 37 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 38 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 39 | 1 | 860 | 92 | 276 | 239 | 115 | 0 | 16 | 0 | 11 | 0 | 40 | 27 | 44 |
| Total | 5 | 2,542 | 108 | 435 | 443 | 265 | 85 | 74 | 80 | 64 | 116 | 305 | 404 | 163 |

Table 12.--Lumber tally volume by 1-inch diameter class for log grade 2

| Log scaling diameter (inches) | Number of logs | Total lumber tally volume | B & Btr. Select | C Select | D Select | Molding | No. 3 Clear | No. 1 Shop | No. 2 Shop | No. 1 Common | No. 2 Common | No. 3 Common | No. 4 Common | No. 5 Common |
|--|----------------------|------------------------------|--------------------|--------------|--------------|--------------|----------------|---------------|---------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| <i>Board feet</i> | | | | | | | | | | | | | | |
| 8 | 1 | 39 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 20 | 5 | 0 |
| 9 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 10 | 1 | 62 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 34 | 24 | 0 | 0 |
| 11 | 3 | 215 | 0 | 3 | 6 | 3 | 0 | 0 | 0 | 5 | 121 | 77 | 0 | 0 |
| 12 | 3 | 316 | 12 | 0 | 46 | 5 | 0 | 0 | 0 | 8 | 121 | 105 | 15 | 4 |
| 13 | 2 | 207 | 0 | 12 | 24 | 0 | 0 | 0 | 0 | 0 | 79 | 68 | 24 | 0 |
| 14 | 2 | 259 | 0 | 0 | 18 | 0 | 0 | 0 | 0 | 8 | 65 | 100 | 40 | 28 |
| 15 | 1 | 170 | 21 | 13 | 23 | 0 | 0 | 8 | 0 | 0 | 55 | 50 | 0 | 0 |
| 16 | 2 | 350 | 6 | 18 | 38 | 0 | 0 | 0 | 0 | 56 | 128 | 29 | 48 | 27 |
| 17 | 1 | 223 | 3 | 5 | 31 | 0 | 10 | 13 | 0 | 0 | 0 | 145 | 16 | 0 |
| 18 | 1 | 165 | 5 | 36 | 36 | 4 | 0 | 0 | 0 | 0 | 0 | 31 | 34 | 19 |
| 19 | 5 | 1,359 | 13 | 157 | 191 | 13 | 81 | 40 | 37 | 0 | 120 | 405 | 251 | 51 |
| 20 | 4 | 1,199 | 5 | 130 | 194 | 55 | 62 | 25 | 0 | 46 | 206 | 402 | 68 | 6 |
| 21 | 5 | 1,629 | 32 | 139 | 221 | 37 | 111 | 75 | 0 | 0 | 344 | 484 | 176 | 10 |
| 22 | 2 | 752 | 0 | 30 | 171 | 52 | 16 | 0 | 0 | 0 | 126 | 337 | 15 | 5 |
| 23 | 4 | 1,675 | 12 | 53 | 325 | 134 | 107 | 22 | 62 | 42 | 169 | 551 | 170 | 28 |
| 24 | 2 | 905 | 4 | 73 | 95 | 98 | 64 | 117 | 5 | 6 | 109 | 210 | 98 | 26 |
| 25 | 5 | 2,050 | 99 | 250 | 302 | 112 | 77 | 23 | 39 | 46 | 48 | 620 | 298 | 136 |
| 26 | 1 | 587 | 12 | 113 | 96 | 42 | 20 | 64 | 0 | 0 | 34 | 126 | 67 | 13 |
| 27 | 4 | 1,684 | 110 | 279 | 261 | 218 | 12 | 12 | 0 | 0 | 84 | 372 | 188 | 148 |
| 28 | 4 | 2,009 | 168 | 293 | 270 | 267 | 32 | 57 | 6 | 0 | 73 | 468 | 292 | 83 |
| 29 | 4 | 2,191 | 161 | 220 | 351 | 334 | 123 | 96 | 16 | 7 | 50 | 358 | 369 | 106 |
| 30 | 2 | 1,085 | 111 | 276 | 131 | 110 | 8 | 12 | 0 | 0 | 7 | 134 | 181 | 115 |
| 31 | 7 | 4,614 | 107 | 643 | 1,066 | 417 | 0 | 8 | 48 | 22 | 115 | 1,024 | 682 | 482 |
| 32 | 4 | 3,079 | 72 | 448 | 946 | 245 | 53 | 46 | 16 | 6 | 120 | 418 | 497 | 212 |
| 33 | 2 | 1,737 | 232 | 456 | 337 | 237 | 48 | 47 | 5 | 0 | 120 | 161 | 152 | 62 |
| 34 | 2 | 1,598 | 123 | 261 | 251 | 121 | 0 | 16 | 16 | 0 | 76 | 445 | 239 | 50 |
| 35 | 2 | 1,803 | 6 | 352 | 535 | 202 | 0 | 16 | 0 | 0 | 56 | 327 | 181 | 128 |
| 36 | 3 | 2,591 | 70 | 416 | 605 | 433 | 12 | 90 | 22 | 0 | 19 | 243 | 310 | 371 |
| 37 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 38 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 39 | 1 | 1,195 | 216 | 271 | 214 | 138 | 0 | 0 | 16 | 0 | 98 | 141 | 89 | 12 |
| 40 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 41 | 1 | 1,176 | 87 | 519 | 234 | 145 | 0 | 0 | 0 | 7 | 25 | 67 | 37 | 55 |
| Total | 81 | 36,924 | 1,687 | 5,473 | 7,022 | 3,422 | 836 | 787 | 283 | 259 | 2,494 | 7,942 | 4,542 | 2,177 |

Table 13.--Lumber tally volume by 1-inch diameter class for log grade 3

| Log scaling diameter (inches) | Number of logs | Total lumber tally volume | B & Btr. Select | C Select | D Select | Molding | No. 3 Clear | No. 1 Shop | No. 2 Shop | No. 1 Common | No. 2 Common | No. 3 Common | No. 4 Common | No. 5 Common |
|--|----------------------|------------------------------|--------------------|-------------|-------------|---------|----------------|---------------|---------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Board feet | | | | | | | | | | | | | | |
| 4 | 1 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 11 | 0 |
| 5 | 4 | 61 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 16 | 19 | 6 |
| 6 | 26 | 489 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 6 | 158 | 202 | 94 | 27 |
| 7 | 60 | 1,657 | 0 | 16 | 7 | 6 | 0 | 0 | 0 | 15 | 512 | 779 | 300 | 22 |
| 8 | 46 | 1,594 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 34 | 479 | 773 | 289 | 16 |
| 9 | 29 | 1,287 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 52 | 483 | 549 | 193 | 10 |
| 10 | 30 | 1,897 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 70 | 903 | 725 | 189 | 0 |
| 11 | 12 | 915 | 5 | 0 | 21 | 0 | 0 | 0 | 0 | 4 | 321 | 469 | 95 | 0 |
| 12 | 10 | 955 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 5 | 449 | 406 | 91 | 0 |
| 13 | 6 | 720 | 8 | 34 | 13 | 0 | 0 | 0 | 0 | 36 | 354 | 192 | 83 | 0 |
| 14 | 4 | 577 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 9 | 280 | 208 | 64 | 11 |
| 15 | 2 | 293 | 0 | 0 | 3 | 5 | 13 | 0 | 0 | 13 | 156 | 78 | 25 | 0 |
| 16 | 1 | 204 | 0 | 0 | 30 | 0 | 0 | 0 | 0 | 0 | 16 | 125 | 33 | 0 |
| 17 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 18 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19 | 1 | 292 | 0 | 6 | 26 | 27 | 37 | 0 | 0 | 14 | 48 | 92 | 42 | 0 |
| 20 | 2 | 598 | 0 | 2 | 12 | 0 | 67 | 13 | 7 | 0 | 104 | 372 | 17 | 4 |
| 21 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 22 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 23 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 24 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25 | 1 | 360 | 10 | 17 | 57 | 0 | 36 | 10 | 12 | 29 | 44 | 115 | 30 | 0 |
| 26 | 1 | 501 | 8 | 10 | 64 | 60 | 97 | 29 | 0 | 0 | 53 | 108 | 72 | 0 |
| 27 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 28 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 29 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 30 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 31 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 32 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 33 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 34 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 35 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 36 | 1 | 1,017 | 145 | 150 | 181 | 87 | 123 | 8 | 0 | 0 | 32 | 175 | 112 | 4 |
| Total | 237 | 13,431 | 176 | 235 | 438 | 185 | 373 | 60 | 19 | 287 | 4,412 | 5,387 | 1,759 | 100 |

Table 14.--Lumber tally volume by 1-inch diameter class for log grade 4

| Log scaling diameter (inches) | Number of logs | Total lumber tally volume | B & Btr. Select | C Select | D Select | Molding | No. 3 Clear | No. 1 Shop | No. 2 Shop | No. 1 Common | No. 2 Common | No. 3 Common | No. 4 Common | No. 5 Common |
|--|----------------------|------------------------------|--------------------|--------------|--------------|--------------|----------------|---------------|---------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| <i>Board feet</i> | | | | | | | | | | | | | | |
| 5 | 1 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 9 | 4 | 0 | 0 |
| 6 | 14 | 265 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 7 | 124 | 86 | 0 | 2 |
| 7 | 55 | 1,637 | 5 | 5 | 5 | 5 | 0 | 0 | 0 | 16 | 547 | 779 | 43 | 28 |
| 8 | 80 | 2,964 | 0 | 17 | 11 | 14 | 7 | 0 | 0 | 82 | 877 | 1,428 | 247 | 59 |
| 9 | 113 | 5,396 | 0 | 6 | 39 | 20 | 0 | 0 | 0 | 95 | 1,827 | 2,623 | 749 | 37 |
| 10 | 108 | 6,649 | 10 | 3 | 63 | 0 | 0 | 4 | 0 | 70 | 2,600 | 3,195 | 636 | 68 |
| 11 | 104 | 8,660 | 6 | 19 | 86 | 22 | 8 | 0 | 0 | 343 | 3,507 | 3,708 | 905 | 56 |
| 12 | 96 | 9,401 | 5 | 26 | 152 | 8 | 0 | 0 | 49 | 202 | 3,870 | 3,976 | 1,071 | 42 |
| 13 | 85 | 9,726 | 13 | 71 | 203 | 30 | 0 | 21 | 34 | 207 | 3,550 | 4,213 | 1,309 | 75 |
| 14 | 77 | 10,200 | 4 | 63 | 162 | 77 | 0 | 17 | 3 | 178 | 3,684 | 4,715 | 1,275 | 68 |
| 15 | 65 | 10,272 | 12 | 89 | 208 | 77 | 48 | 68 | 42 | 100 | 3,427 | 4,783 | 1,312 | 106 |
| 16 | 47 | 8,580 | 3 | 80 | 158 | 29 | 13 | 47 | 62 | 151 | 2,861 | 4,224 | 862 | 90 |
| 17 | 49 | 10,197 | 66 | 213 | 394 | 124 | 82 | 162 | 174 | 265 | 2,854 | 4,836 | 918 | 109 |
| 18 | 31 | 7,550 | 56 | 136 | 341 | 54 | 118 | 121 | 140 | 128 | 1,759 | 3,609 | 1,027 | 61 |
| 19 | 26 | 6,450 | 0 | 89 | 213 | 73 | 101 | 354 | 164 | 136 | 1,371 | 3,064 | 837 | 48 |
| 20 | 23 | 6,616 | 12 | 136 | 322 | 72 | 130 | 347 | 186 | 58 | 1,186 | 2,946 | 1,134 | 87 |
| 21 | 24 | 7,459 | 38 | 203 | 443 | 96 | 351 | 348 | 191 | 104 | 1,398 | 3,054 | 1,108 | 125 |
| 22 | 16 | 5,464 | 23 | 201 | 456 | 169 | 145 | 387 | 144 | 16 | 702 | 2,067 | 1,065 | 89 |
| 23 | 9 | 3,160 | 18 | 30 | 219 | 27 | 188 | 235 | 85 | 56 | 324 | 1,622 | 344 | 12 |
| 24 | 11 | 4,602 | 39 | 163 | 426 | 110 | 168 | 191 | 138 | 30 | 294 | 2,234 | 712 | 97 |
| 25 | 11 | 4,366 | 87 | 218 | 442 | 172 | 181 | 107 | 91 | 24 | 318 | 1,454 | 932 | 340 |
| 26 | 7 | 3,197 | 82 | 148 | 435 | 213 | 186 | 192 | 92 | 36 | 262 | 1,015 | 496 | 40 |
| 27 | 4 | 1,598 | 102 | 163 | 336 | 31 | 37 | 54 | 43 | 0 | 98 | 394 | 292 | 48 |
| 28 | 6 | 3,477 | 123 | 175 | 343 | 187 | 144 | 134 | 137 | 0 | 266 | 1,107 | 692 | 169 |
| 29 | 3 | 1,690 | 68 | 106 | 381 | 75 | 107 | 158 | 44 | 0 | 153 | 305 | 279 | 14 |
| 30 | 2 | 1,215 | 8 | 49 | 69 | 33 | 137 | 113 | 55 | 0 | 13 | 412 | 258 | 68 |
| 31 | 2 | 1,177 | 25 | 105 | 255 | 60 | 38 | 27 | 64 | 12 | 73 | 282 | 156 | 80 |
| 32 | 1 | 660 | 45 | 77 | 186 | 46 | 29 | 8 | 24 | 30 | 65 | 124 | 5 | 5 |
| 33 | 5 | 3,702 | 73 | 296 | 547 | 238 | 289 | 158 | 61 | 0 | 114 | 1,029 | 582 | 315 |
| 34 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 35 | 2 | 1,817 | 40 | 119 | 300 | 140 | 86 | 68 | 32 | 0 | 60 | 465 | 381 | 126 |
| 36 | 1 | 933 | 58 | 68 | 96 | 185 | 59 | 83 | 0 | 0 | 54 | 252 | 69 | 9 |
| 37 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 38 | 1 | 1,060 | 91 | 69 | 228 | 95 | 56 | 104 | 32 | 0 | 5 | 157 | 203 | 20 |
| Total | 1,079 | 150,156 | 1,112 | 3,143 | 7,522 | 2,436 | 2,708 | 3,508 | 2,087 | 2,349 | 38,252 | 64,162 | 20,384 | 2,493 |

Table 15.--Lumber tally volume by 1-inch diameter class for log grade 9

| Log scaling diameter (inches) | Number of logs | Total lumber tally volume | B & Btr. Select | C Select | D Select | Molding | No. 3 Clear | No. 1 Shop | No. 2 Shop | No. 1 Common | No. 2 Common | No. 3 Common | No. 4 Common | No. 5 Common |
|--|----------------------|------------------------------|--------------------|-------------|-------------|---------|----------------|---------------|---------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| <i>Board feet</i> | | | | | | | | | | | | | | |
| <i>Volume by grade</i> | | | | | | | | | | | | | | |
| 12 | 1 | 63 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 31 | 12 | 20 |
| 13 | 1 | 123 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 115 | 0 | 0 |
| 14 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 16 | 1 | 132 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 24 | 108 | 0 |
| 17 | 3 | 553 | 0 | 6 | 4 | 0 | 0 | 0 | 6 | 0 | 4 | 162 | 283 | 88 |
| 18 | 2 | 493 | 0 | 53 | 43 | 8 | 0 | 0 | 0 | 5 | 46 | 86 | 98 | 154 |
| 19 | 3 | 605 | 7 | 0 | 27 | 13 | 0 | 0 | 13 | 0 | 82 | 271 | 109 | 83 |
| 20 | 2 | 406 | 0 | 13 | 7 | 0 | 0 | 15 | 0 | 0 | 59 | 130 | 74 | 108 |
| 21 | 1 | 230 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 0 | 0 | 71 | 58 | 86 |
| 22 | 2 | 631 | 0 | 10 | 32 | 11 | 0 | 0 | 0 | 0 | 12 | 277 | 155 | 134 |
| 23 | 1 | 347 | 0 | 0 | 16 | 0 | 0 | 13 | 0 | 0 | 0 | 25 | 153 | 140 |
| 24 | 1 | 323 | 0 | 0 | 22 | 0 | 0 | 0 | 0 | 0 | 3 | 56 | 145 | 97 |
| 25 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 26 | 2 | 860 | 28 | 51 | 80 | 100 | 37 | 17 | 8 | 0 | 54 | 170 | 170 | 145 |
| 27 | 1 | 435 | 0 | 3 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 40 | 107 | 261 |
| 28 | 1 | 378 | 0 | 14 | 38 | 0 | 0 | 0 | 0 | 0 | 0 | 19 | 87 | 220 |
| 29 | 2 | 902 | 19 | 78 | 105 | 52 | 8 | 37 | 12 | 0 | 0 | 178 | 243 | 170 |
| 30 | 2 | 1,084 | 34 | 72 | 213 | 44 | 17 | 105 | 33 | 0 | 0 | 109 | 300 | 157 |
| 31 | 1 | 392 | 10 | 61 | 43 | 8 | 0 | 12 | 17 | 0 | 5 | 72 | 49 | 115 |
| 32 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 33 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 34 | 1 | 656 | 0 | 83 | 85 | 18 | 32 | 0 | 0 | 0 | 0 | 31 | 123 | 284 |
| 35 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 36 | 1 | 1,037 | 0 | 28 | 179 | 43 | 0 | 0 | 0 | 0 | 0 | 305 | 306 | 176 |
| Total | 29 | 9,650 | 98 | 472 | 918 | 297 | 94 | 199 | 104 | 5 | 273 | 2,172 | 2,580 | 2,438 |

Table 16.--Lumber tally volume by 1-inch diameter class for all log grades

| Log scaling diameter (inches) | Number of logs | Total lumber tally volume | B & Btr. Select | C Select | D Select | Molding | No. 3 Clear | No. 1 Shop | No. 2 Shop | No. 1 Common | No. 2 Common | No. 3 Common | No. 4 Common | No. 5 Common |
|--|----------------------|------------------------------|--------------------|-------------|-------------|---------|----------------|---------------|---------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| <i>Board feet</i> | | | | | | | | | | | | | | |
| 4 | 1 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 11 | 0 |
| 5 | 5 | 77 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 29 | 20 | 19 | 6 |
| 6 | 40 | 754 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 13 | 282 | 288 | 137 | 29 |
| 7 | 115 | 3,294 | 5 | 21 | 12 | 11 | 0 | 0 | 0 | 31 | 1,059 | 1,558 | 547 | 50 |
| 8 | 127 | 4,597 | 0 | 24 | 14 | 14 | 7 | 0 | 0 | 116 | 1,363 | 2,221 | 763 | 75 |
| 9 | 142 | 6,683 | 0 | 6 | 39 | 20 | 0 | 0 | 0 | 147 | 2,310 | 3,172 | 942 | 47 |
| 10 | 139 | 8,608 | 10 | 3 | 77 | 0 | 0 | 4 | 0 | 140 | 3,537 | 3,944 | 825 | 68 |
| 11 | 119 | 9,790 | 11 | 22 | 113 | 25 | 8 | 0 | 0 | 352 | 3,949 | 4,254 | 1,000 | 56 |
| 12 | 110 | 10,735 | 17 | 26 | 202 | 13 | 0 | 0 | 49 | 215 | 4,440 | 4,518 | 1,189 | 66 |
| 13 | 94 | 10,776 | 21 | 117 | 240 | 30 | 0 | 21 | 34 | 243 | 3,991 | 4,588 | 1,416 | 75 |
| 14 | 83 | 11,036 | 4 | 63 | 185 | 31 | 0 | 17 | 3 | 195 | 4,029 | 5,023 | 1,379 | 107 |
| 15 | 68 | 10,735 | 33 | 102 | 234 | 82 | 61 | 76 | 42 | 113 | 3,638 | 4,911 | 1,337 | 106 |
| 16 | 51 | 9,266 | 9 | 98 | 226 | 29 | 13 | 47 | 62 | 207 | 3,005 | 4,402 | 1,051 | 117 |
| 17 | 53 | 10,973 | 69 | 224 | 429 | 124 | 92 | 175 | 180 | 265 | 2,858 | 5,143 | 1,217 | 197 |
| 18 | 34 | 8,208 | 61 | 225 | 420 | 66 | 118 | 121 | 140 | 133 | 1,805 | 3,726 | 1,159 | 234 |
| 19 | 35 | 8,706 | 20 | 252 | 457 | 126 | 219 | 394 | 214 | 150 | 1,621 | 3,832 | 1,239 | 182 |
| 20 | 31 | 8,819 | 17 | 281 | 535 | 127 | 259 | 400 | 193 | 104 | 1,555 | 3,850 | 1,293 | 205 |
| 21 | 31 | 9,545 | 80 | 412 | 674 | 177 | 462 | 423 | 206 | 112 | 1,750 | 3,617 | 1,361 | 271 |
| 22 | 20 | 6,847 | 23 | 241 | 659 | 232 | 161 | 387 | 144 | 16 | 840 | 2,681 | 1,235 | 228 |
| 23 | 15 | 5,587 | 30 | 125 | 621 | 193 | 306 | 270 | 147 | 143 | 597 | 2,288 | 687 | 180 |
| 24 | 14 | 5,830 | 43 | 236 | 543 | 208 | 232 | 308 | 143 | 36 | 406 | 2,500 | 955 | 220 |
| 25 | 17 | 6,776 | 196 | 485 | 801 | 284 | 294 | 140 | 142 | 99 | 410 | 2,189 | 1,260 | 476 |
| 26 | 11 | 5,145 | 130 | 322 | 675 | 415 | 340 | 302 | 100 | 36 | 403 | 1,419 | 805 | 198 |
| 27 | 9 | 3,717 | 212 | 445 | 621 | 249 | 49 | 66 | 43 | 0 | 182 | 806 | 587 | 457 |
| 28 | 12 | 6,299 | 297 | 487 | 694 | 454 | 202 | 219 | 175 | 0 | 339 | 1,687 | 1,204 | 541 |
| 29 | 10 | 5,398 | 248 | 446 | 927 | 535 | 286 | 321 | 120 | 7 | 207 | 915 | 1,096 | 290 |
| 30 | 6 | 3,384 | 153 | 397 | 413 | 187 | 162 | 230 | 88 | 0 | 20 | 655 | 739 | 340 |
| 31 | 10 | 6,183 | 142 | 809 | 1,364 | 485 | 38 | 47 | 129 | 34 | 193 | 1,378 | 887 | 677 |
| 32 | 5 | 3,739 | 117 | 525 | 1,132 | 291 | 82 | 54 | 40 | 36 | 185 | 542 | 518 | 217 |
| 33 | 7 | 5,439 | 305 | 752 | 884 | 475 | 337 | 205 | 61 | 0 | 119 | 1,190 | 734 | 377 |
| 34 | 3 | 2,254 | 123 | 344 | 336 | 139 | 32 | 16 | 16 | 0 | 76 | 476 | 362 | 334 |
| 35 | 4 | 3,620 | 46 | 471 | 835 | 342 | 86 | 84 | 32 | 0 | 116 | 792 | 562 | 254 |
| 36 | 6 | 5,578 | 273 | 662 | 1,061 | 748 | 194 | 181 | 22 | 0 | 105 | 975 | 797 | 560 |
| 37 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 38 | 1 | 1,060 | 91 | 69 | 228 | 95 | 56 | 104 | 32 | 0 | 5 | 157 | 203 | 20 |
| 39 | 2 | 2,055 | 308 | 547 | 453 | 253 | 0 | 16 | 16 | 11 | 98 | 181 | 116 | 56 |
| 40 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 41 | 1 | 1,176 | 87 | 519 | 234 | 145 | 0 | 0 | 0 | 7 | 25 | 67 | 37 | 55 |
| Total | 1,431 | 212,703 | 3,181 | 9,758 | 16,343 | 6,605 | 4,096 | 4,628 | 2,573 | 2,964 | 45,547 | 79,968 | 29,669 | 7,371 |

Table 17.--Lumber grade recovery as a percentage of lumber tally volume by 1-inch diameter class for log grade 1

| Log scaling diameter (inches) | Number of logs | Total lumber tally volume | B & Btr. Select | C Select | D Select | Molding | No. 3 Clear | No. 1 Shop | No. 2 Shop | No. 1 Common | No. 2 Common | No. 3 Common | No. 4 Common | No. 5 Common |
|--|----------------------|------------------------------|--------------------|-------------|-------------|---------|----------------|---------------|---------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Board feet ----- Percentage of lumber tally volume ----- | | | | | | | | | | | | | | |
| 21 | 1 | 227 | 4.41 | 30.84 | 4.41 | 19.38 | 0 | 0 | 0 | 3.52 | 3.52 | 3.52 | 8.37 | 22.03 |
| 22 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 23 | 1 | 405 | 0 | 10.37 | 15.06 | 7.90 | 2.72 | 0 | 0 | 11.11 | 25.68 | 22.22 | 4.94 | 0 |
| 24 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 26 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 27 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 28 | 1 | 435 | 1.38 | 1.15 | 9.89 | 0 | 5.98 | 6.44 | 7.36 | 0 | 0 | 21.38 | 30.57 | 15.86 |
| 29 | 1 | 615 | 0 | 6.83 | 14.63 | 12.03 | 7.80 | 4.88 | 7.80 | 0 | .65 | 12.03 | 33.33 | 0 |
| 30 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 31 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 32 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 33 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 34 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 35 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 36 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 37 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 38 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 39 | 1 | 860 | 10.70 | 32.09 | 27.79 | 13.37 | 0 | 1.86 | 0 | 1.28 | 0 | 4.65 | 3.14 | 5.12 |
| Total | 5 | 2,542 | 4.25 | 17.11 | 17.43 | 10.42 | 3.34 | 2.91 | 3.15 | 2.52 | 4.56 | 12.00 | 15.89 | 6.41 |

Table 18.--Lumber grade recovery as a percentage of lumber tally volume by 1-inch diameter class for log grade 2

| Log scaling diameter (inches) | Number of logs | Total lumber tally volume | B & Btr. Select | C Select | D Select | Molding | No. 3 Clear | No. 1 Shop | No. 2 Shop | No. 1 Common | No. 2 Common | No. 3 Common | No. 4 Common | No. 5 Common |
|--|----------------------|------------------------------|--------------------|-------------|-------------|---------|----------------|---------------|---------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| <i>Board feet</i> | | | | | | | | | | | | | | |
| 8 | 1 | 39 | 0 | 17.95 | 0 | 0 | 0 | 0 | 0 | 0 | 17.95 | 51.28 | 12.82 | 0 |
| 9 | 0 | -- | 0 | -- | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 10 | 1 | 62 | 0 | 0 | 6.45 | 0 | 0 | 0 | 0 | 0 | 54.84 | 38.71 | 0 | 0 |
| 11 | 3 | 215 | 0 | 1.40 | 2.79 | 1.40 | 0 | 0 | 0 | 2.33 | 56.28 | 35.81 | 0 | 0 |
| 12 | 3 | 316 | 3.80 | 0 | 14.56 | 1.58 | 0 | 0 | 0 | 2.53 | 38.29 | 33.23 | 4.75 | 1.27 |
| 13 | 2 | 207 | 0 | 5.80 | 11.59 | 0 | 0 | 0 | 0 | 0 | 38.16 | 32.85 | 11.59 | 0 |
| 14 | 2 | 259 | 0 | 0 | 6.95 | 0 | 0 | 0 | 0 | 3.09 | 25.10 | 38.61 | 15.44 | 10.81 |
| 15 | 1 | 170 | 12.35 | 7.65 | 13.53 | 0 | 0 | 4.71 | 0 | 0 | 32.35 | 29.41 | 0 | 0 |
| 16 | 2 | 350 | 1.71 | 5.14 | 10.86 | 0 | 0 | 0 | 0 | 16.00 | 36.57 | 8.29 | 13.71 | 7.71 |
| 17 | 1 | 223 | 1.35 | 2.24 | 13.90 | 0 | 4.48 | 5.83 | 0 | 0 | 0 | 65.02 | 7.17 | 0 |
| 18 | 1 | 165 | 3.03 | 21.82 | 21.82 | 2.42 | 0 | 0 | 0 | 0 | 0 | 18.79 | 20.61 | 11.52 |
| 19 | 5 | 1,359 | .96 | 11.55 | 14.05 | .96 | 5.96 | 2.94 | 0 | 0 | 8.83 | 29.80 | 18.47 | 3.75 |
| 20 | 4 | 1,199 | .42 | 10.84 | 16.18 | 4.59 | 5.17 | 2.09 | 0 | 3.84 | 17.18 | 33.53 | 5.67 | .50 |
| 21 | 5 | 1,629 | 1.96 | 8.53 | 13.57 | 2.27 | 6.81 | 4.60 | 0 | 0 | 21.12 | 29.71 | 10.80 | .61 |
| 22 | 2 | 752 | 0 | 3.99 | 22.74 | 6.91 | 2.13 | 0 | 0 | 0 | 16.76 | 44.81 | 1.99 | .66 |
| 23 | 4 | 1,675 | .72 | 3.16 | 19.40 | 8.00 | 6.39 | 1.31 | 3.70 | 2.51 | 10.09 | 32.90 | 10.15 | 1.67 |
| 24 | 2 | 905 | .44 | 8.07 | 10.50 | 10.83 | 7.07 | 12.93 | .55 | .66 | 12.04 | 23.20 | 10.83 | 2.87 |
| 25 | 5 | 2,050 | 4.83 | 12.20 | 14.73 | 5.46 | 3.76 | 1.12 | 1.90 | 2.24 | 2.34 | 30.24 | 14.54 | 6.63 |
| 26 | 1 | 587 | 2.04 | 19.25 | 16.35 | 7.16 | 3.41 | 10.90 | 0 | 0 | 5.79 | 21.47 | 11.41 | 2.21 |
| 27 | 4 | 1,684 | 6.53 | 16.57 | 15.50 | 12.95 | .71 | .71 | 0 | 0 | 4.99 | 22.09 | 11.16 | 8.79 |
| 28 | 4 | 2,009 | 8.36 | 14.58 | 13.44 | 13.29 | 1.59 | 2.84 | .30 | 0 | 3.63 | 23.30 | 14.53 | 4.13 |
| 29 | 4 | 2,191 | 7.35 | 10.04 | 16.02 | 15.24 | 5.61 | 4.38 | .73 | .32 | 2.28 | 16.34 | 16.84 | 4.84 |
| 30 | 2 | 1,085 | 10.23 | 25.44 | 12.07 | 10.14 | .74 | 1.11 | 0 | 0 | .65 | 12.35 | 16.68 | 10.60 |
| 31 | 7 | 4,614 | 2.32 | 13.94 | 23.10 | 9.04 | 0 | .17 | 1.04 | .48 | 2.49 | 22.19 | 14.78 | 10.45 |
| 32 | 4 | 3,079 | 2.34 | 14.55 | 30.72 | 7.96 | 1.72 | 1.49 | .52 | .19 | 3.90 | 13.58 | 16.14 | 6.89 |
| 33 | 2 | 1,737 | 13.36 | 26.25 | 19.40 | 13.64 | 2.76 | 2.71 | 0 | 0 | .29 | 9.27 | 8.75 | 3.57 |
| 34 | 2 | 1,598 | 7.70 | 16.33 | 15.71 | 7.57 | 0 | 1.00 | 1.00 | 0 | 4.76 | 27.85 | 14.96 | 3.13 |
| 35 | 2 | 1,803 | .33 | 19.52 | 29.67 | 11.20 | 0 | .89 | 0 | 0 | 3.11 | 18.14 | 10.04 | 7.10 |
| 36 | 3 | 2,591 | 2.70 | 16.06 | 23.35 | 16.71 | .46 | 3.47 | .85 | 0 | .73 | 9.38 | 11.96 | 14.32 |
| 37 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 38 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 39 | 1 | 1,195 | 18.08 | 22.68 | 17.91 | 11.55 | 0 | 0 | 1.34 | 0 | 8.20 | 11.80 | 7.45 | 1.00 |
| 40 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 41 | 1 | 1,176 | 7.40 | 44.13 | 19.90 | 12.33 | 0 | 0 | 0 | .60 | 2.13 | 5.70 | 3.15 | 4.68 |
| Total | 81 | 36,924 | 4.57 | 14.82 | 19.02 | 9.27 | 2.26 | 2.13 | .77 | .70 | 6.75 | 21.51 | 12.30 | 5.90 |

Table 19.--Lumber grade recovery as a percentage of lumber tally volume by 1-inch diameter class for log grade 3

| Log scaling diameter (inches) | Number of logs | Total lumber tally volume | B & Btr. Select | C Select | D Select | Molding | No. 3 Clear | No. 1 Shop | No. 2 Shop | No. 1 Common | No. 2 Common | No. 3 Common | No. 4 Common | No. 5 Common |
|--|----------------------|------------------------------|--------------------|-------------|-------------|---------|----------------|---------------|---------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| <i>Board feet</i> | | | | | | | | | | | | | | |
| <i>Percentage of lumber tally volume</i> | | | | | | | | | | | | | | |
| 4 | 1 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21.43 | 78.57 | 0 |
| 5 | 4 | 61 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 26.23 | 31.15 | 9.84 |
| 6 | 26 | 489 | 0 | 0 | .41 | 0 | 0 | 0 | 0 | 1.23 | 32.79 | 41.31 | 19.22 | 5.52 |
| 7 | 60 | 1,657 | 0 | .97 | .42 | .36 | 0 | 0 | 0 | .91 | 30.90 | 47.01 | 18.11 | 1.33 |
| 8 | 46 | 1,594 | 0 | 0 | .19 | 0 | 0 | 0 | 0 | 2.13 | 30.05 | 48.49 | 18.13 | 1.00 |
| 9 | 29 | 1,287 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4.04 | 37.53 | 42.66 | 15.00 | .78 |
| 10 | 30 | 1,897 | 0 | 0 | .53 | 0 | 0 | 0 | 0 | 3.69 | 47.60 | 38.22 | 9.96 | 0 |
| 11 | 12 | 915 | .55 | 0 | 2.30 | 0 | 0 | 0 | 0 | .44 | 35.08 | 51.26 | 10.38 | 0 |
| 12 | 10 | 955 | 0 | 0 | .42 | 0 | 0 | 0 | 0 | .52 | 47.02 | 42.51 | 9.53 | 0 |
| 13 | 6 | 720 | 1.11 | 4.72 | 1.81 | 0 | 0 | 0 | 0 | 5.00 | 49.17 | 26.67 | 11.53 | 0 |
| 14 | 4 | 577 | 0 | 0 | .87 | 0 | 0 | 0 | 0 | 1.56 | 48.53 | 36.05 | 11.09 | 1.91 |
| 15 | 2 | 293 | 0 | 0 | 1.02 | 1.71 | 4.44 | 0 | 0 | 4.44 | 53.24 | 26.62 | 8.53 | 0 |
| 16 | 1 | 204 | 0 | 0 | 14.71 | 0 | 0 | 0 | 0 | 0 | 7.84 | 61.27 | 16.18 | 0 |
| 17 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 18 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19 | 1 | 292 | 0 | 2.05 | 8.90 | 9.25 | 12.67 | 0 | 0 | 4.79 | 16.44 | 31.51 | 14.38 | 0 |
| 20 | 2 | 598 | 0 | .33 | 2.01 | 0 | 11.20 | 2.17 | 1.17 | 0 | 17.39 | 62.21 | 2.84 | .67 |
| 21 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 22 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 23 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 24 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25 | 1 | 360 | 2.78 | 4.72 | 15.83 | 0 | 10.00 | 2.78 | 3.33 | 8.06 | 12.22 | 31.94 | 8.33 | 0 |
| 26 | 1 | 501 | 1.60 | 2.00 | 12.77 | 11.98 | 19.36 | 5.79 | 0 | 0 | 10.58 | 21.56 | 14.37 | 0 |
| 27 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 28 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 29 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 30 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 31 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 32 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 33 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 34 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 35 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 36 | 1 | 1,017 | 14.26 | 14.75 | 17.80 | 8.55 | 12.09 | .79 | 0 | 0 | 3.15 | 17.21 | 11.01 | .39 |
| Total | 237 | 13,431 | 1.31 | 1.75 | 3.26 | 1.38 | 2.78 | .45 | .14 | 2.14 | 32.85 | 40.11 | 13.10 | .74 |

Table 20.--Lumber grade recovery as a percentage of lumber tally volume by 1-inch diameter class for log grade 4

| Log scaling diameter (inches) | Number of logs | Total lumber tally volume | B & Btr. Select | C Select | D Select | Molding | No. 3 Clear | No. 1 Shop | No. 2 Shop | No. 1 Common | No. 2 Common | No. 3 Common | No. 4 Common | No. 5 Common |
|--|----------------------|------------------------------|--------------------|-------------|-------------|---------|----------------|---------------|---------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Board feet ----- Percentage of lumber tally volume ----- | | | | | | | | | | | | | | |
| 5 | 1 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18.75 | 56.25 | 25.00 | 0 | 0 |
| 6 | 14 | 265 | 0 | 0 | 1.13 | 0 | 0 | 0 | 0 | 2.64 | 46.79 | 32.45 | 16.23 | .75 |
| 7 | 55 | 1,637 | .31 | .31 | .31 | .31 | 0 | 0 | 0 | .98 | 33.41 | 47.59 | 15.09 | 1.71 |
| 8 | 80 | 2,964 | 0 | .57 | .37 | .47 | 0 | 0 | 0 | 2.77 | 29.59 | 48.18 | 15.82 | 1.99 |
| 9 | 113 | 5,396 | 0 | .11 | .72 | .37 | 0 | 0 | 0 | 1.76 | 33.86 | 48.61 | 13.88 | .69 |
| 10 | 108 | 6,649 | .15 | .05 | .95 | 0 | 0 | .06 | 0 | 1.05 | 39.10 | 48.05 | 9.57 | 1.02 |
| 11 | 104 | 8,660 | .07 | .22 | .99 | .25 | 0 | 0 | 0 | 3.96 | 40.50 | 42.82 | 10.45 | .65 |
| 12 | 96 | 9,401 | .05 | .28 | 1.62 | .09 | 0 | 0 | .52 | 2.15 | 41.17 | 42.29 | 11.39 | .45 |
| 13 | 85 | 9,726 | .13 | .73 | 2.09 | .31 | 0 | .22 | .35 | 2.13 | 36.50 | 43.32 | 13.46 | .77 |
| 14 | 77 | 10,200 | .04 | .62 | 1.59 | .30 | 0 | .17 | .03 | 1.75 | 36.12 | 46.23 | 12.50 | .67 |
| 15 | 65 | 10,272 | .12 | .87 | 2.02 | .75 | 0 | .66 | .41 | .97 | 33.36 | 46.56 | 12.77 | 1.03 |
| 16 | 47 | 8,580 | .03 | .93 | 1.84 | .75 | .47 | .55 | .72 | 1.76 | 33.34 | 49.23 | 10.05 | 1.05 |
| 17 | 49 | 10,197 | .65 | 2.09 | 3.86 | 1.22 | .80 | 1.59 | 1.71 | 2.60 | 27.99 | 47.43 | 9.00 | 1.07 |
| 18 | 31 | 7,550 | .74 | 1.80 | 4.52 | .72 | 1.56 | 1.60 | 1.85 | 1.70 | 23.30 | 47.80 | 13.60 | .81 |
| 19 | 26 | 6,450 | 0 | 1.38 | 3.30 | 1.13 | 1.57 | 5.49 | 2.54 | 2.11 | 21.26 | 47.50 | 12.98 | .74 |
| 20 | 23 | 6,616 | .18 | 2.06 | 4.87 | 1.09 | 1.96 | 5.24 | 2.81 | .88 | 17.93 | 44.53 | 17.14 | 1.31 |
| 21 | 24 | 7,459 | .51 | 2.72 | 5.94 | 1.29 | 4.71 | 4.67 | 2.56 | 1.39 | 18.74 | 40.94 | 14.85 | 1.68 |
| 22 | 16 | 5,464 | .42 | 3.68 | 8.35 | 3.09 | 2.65 | 7.08 | 2.64 | .29 | 12.85 | 37.83 | 19.49 | 1.63 |
| 23 | 9 | 3,160 | .57 | .95 | 6.93 | .85 | 5.95 | 7.44 | 2.69 | 1.77 | 10.25 | 51.33 | 10.89 | .38 |
| 24 | 11 | 4,602 | .85 | 3.54 | 9.26 | 3.39 | 3.65 | 4.15 | 3.00 | .65 | 6.39 | 48.54 | 15.47 | 2.11 |
| 25 | 11 | 4,366 | 1.99 | 4.99 | 10.12 | 3.94 | 4.15 | 2.45 | 2.08 | .55 | 7.28 | 33.30 | 21.35 | 7.79 |
| 26 | 7 | 3,197 | 2.56 | 4.63 | 13.61 | 6.66 | 5.82 | 6.01 | 2.88 | 1.13 | 8.20 | 31.75 | 15.51 | 1.25 |
| 27 | 4 | 1,598 | 6.38 | 10.20 | 21.03 | 1.94 | 2.32 | 3.38 | 2.69 | 0 | 6.13 | 24.66 | 18.27 | 3.00 |
| 28 | 6 | 3,477 | 3.54 | 5.03 | 9.86 | 5.38 | 4.14 | 3.85 | 3.94 | 0 | 7.65 | 31.84 | 19.90 | 4.86 |
| 29 | 3 | 1,690 | 4.02 | 6.27 | 22.54 | 4.44 | 6.33 | 9.35 | 2.60 | 0 | 9.05 | 18.05 | 16.51 | .83 |
| 30 | 2 | 1,215 | .66 | 4.03 | 5.68 | 2.72 | 11.28 | 9.30 | 4.53 | 0 | 1.07 | 33.91 | 21.23 | 5.60 |
| 31 | 2 | 1,177 | 2.12 | 8.92 | 21.67 | 5.10 | 3.23 | 2.29 | 5.44 | 1.02 | 6.20 | 23.96 | 13.25 | 6.80 |
| 32 | 1 | 660 | 6.82 | 11.67 | 28.18 | 6.97 | 4.39 | 1.21 | 3.64 | 4.55 | 9.85 | 18.79 | 3.18 | .76 |
| 33 | 5 | 3,702 | 1.97 | 8.00 | 14.78 | 6.43 | 7.81 | 4.27 | 1.65 | 0 | 3.08 | 27.80 | 15.72 | 8.51 |
| 34 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 35 | 2 | 1,817 | 2.20 | 6.55 | 16.51 | 7.71 | 4.73 | 3.74 | 1.76 | 0 | 3.30 | 25.59 | 20.97 | 6.93 |
| 36 | 1 | 933 | 6.22 | 7.29 | 10.29 | 19.83 | 6.32 | 8.90 | 0 | 0 | 5.79 | 27.01 | 7.40 | .96 |
| 37 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 38 | 1 | 1,060 | 8.58 | 6.51 | 21.51 | 8.96 | 5.28 | 9.81 | 3.02 | 0 | .47 | 14.81 | 19.15 | 1.89 |
| Total | 1,079 | 150,156 | .74 | 2.09 | 5.01 | 1.62 | 1.80 | 2.34 | 1.39 | 1.56 | 25.47 | 42.73 | 13.58 | 1.66 |

Table 21.--Lumber grade recovery as a percentage of lumber tally volume by 1-inch diameter class for log grade 9

| Log scaling diameter (inches) | Number of logs | Total lumber tally volume | B & Btr. Select | C Select | D Select | Molding | No. 3 Clear | No. 1 Shop | No. 2 Shop | No. 1 Common | No. 2 Common | No. 3 Common | No. 4 Common | No. 5 Common |
|--|----------------------|------------------------------|--------------------|-------------|-------------|---------|----------------|---------------|---------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| <i>Board feet</i> | | | | | | | | | | | | | | |
| <i>Percentage of lumber tally volume</i> | | | | | | | | | | | | | | |
| 12 | 1 | 63 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 49.21 | 19.05 | 31.75 |
| 13 | 1 | 123 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6.50 | 93.50 | 0 | 0 |
| 14 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 16 | 1 | 132 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18.18 | 81.82 | 0 |
| 17 | 3 | 553 | 0 | 1.08 | .72 | 0 | 0 | 0 | 1.08 | 0 | .72 | 29.29 | 51.18 | 15.91 |
| 18 | 2 | 493 | 0 | 10.75 | 8.72 | 1.62 | 0 | 0 | 0 | 1.01 | 9.33 | 17.44 | 19.88 | 31.24 |
| 19 | 3 | 605 | 1.16 | 0 | 4.46 | 2.15 | 0 | 0 | 2.15 | 0 | 13.55 | 44.79 | 18.02 | 13.72 |
| 20 | 2 | 406 | 0 | 3.20 | 1.72 | 0 | 0 | 3.69 | 0 | 0 | 14.53 | 32.02 | 18.23 | 26.60 |
| 21 | 1 | 230 | 0 | 0 | 0 | 0 | 0 | 0 | 6.52 | 0 | 0 | 30.87 | 25.22 | 37.39 |
| 22 | 2 | 631 | 0 | 1.58 | 5.07 | 1.74 | 0 | 0 | 0 | 0 | 1.90 | 43.90 | 24.56 | 21.24 |
| 23 | 1 | 347 | 0 | 0 | 4.61 | 0 | 0 | 3.75 | 0 | 0 | 0 | 7.20 | 44.09 | 40.35 |
| 24 | 1 | 323 | 0 | 0 | 6.81 | 0 | 0 | 0 | 0 | 0 | .93 | 17.34 | 44.89 | 30.03 |
| 25 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 26 | 2 | 860 | 3.26 | 5.93 | 9.30 | 11.63 | 4.30 | 1.98 | .93 | 0 | 6.28 | 19.77 | 19.77 | 16.86 |
| 27 | 1 | 435 | 0 | .69 | 5.52 | 0 | 0 | 0 | 0 | 0 | 0 | 9.20 | 24.60 | 60.00 |
| 28 | 1 | 378 | 0 | 3.70 | 10.05 | 0 | 0 | 0 | 0 | 0 | 0 | 5.03 | 23.02 | 58.20 |
| 29 | 2 | 902 | 2.11 | 8.65 | 11.64 | 5.76 | .89 | 4.10 | 1.33 | 0 | 0 | 19.73 | 26.94 | 18.85 |
| 30 | 2 | 1,084 | 3.14 | 6.64 | 19.65 | 4.06 | 1.57 | 9.69 | 3.04 | 0 | 0 | 10.06 | 27.68 | 14.48 |
| 31 | 1 | 392 | 2.55 | 15.56 | 10.97 | 2.04 | 0 | 3.06 | 4.34 | 0 | 1.28 | 18.37 | 12.50 | 29.34 |
| 32 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 33 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 34 | 1 | 656 | 0 | 12.65 | 12.96 | 2.74 | 4.88 | 0 | 0 | 0 | 0 | 4.73 | 18.75 | 43.29 |
| 35 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 36 | 1 | 1,037 | 0 | 2.70 | 17.26 | 4.15 | 0 | 0 | 0 | 0 | 0 | 29.41 | 29.51 | 16.97 |
| Total | 29 | 9,650 | 1.02 | 4.89 | 9.51 | 3.08 | .97 | 2.06 | 1.08 | .05 | 2.83 | 22.51 | 26.74 | 25.26 |

Table 22.--Lumber grade recovery as a percentage of lumber tally volume by 1-inch diameter class for all log grades

| Log scaling diameter (inches) | Number of logs | Total lumber tally volume | B & Btr. Select | C Select | D Select | Molding | No. 3 Clear | No. 1 Shop | No. 2 Shop | No. 1 Common | No. 2 Common | No. 3 Common | No. 4 Common | No. 5 Common |
|--|----------------------|------------------------------|--------------------|-------------|-------------|---------|----------------|---------------|---------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| <i>Board feet</i> | | | | | | | | | | | | | | |
| 4 | 1 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21.43 | 78.57 | 0 |
| 5 | 5 | 77 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3.90 | 37.66 | 25.97 | 24.68 | 7.79 |
| 6 | 40 | 754 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1.72 | 37.40 | 38.20 | 18.17 | 3.85 |
| 7 | 115 | 3,294 | .15 | .64 | .66 | 0 | 0 | 0 | 0 | .94 | 32.15 | 47.30 | 16.61 | 1.52 |
| 8 | 127 | 4,597 | 0 | .52 | .30 | .33 | 0 | 0 | 0 | 2.52 | 29.65 | 48.31 | 16.60 | 1.63 |
| 9 | 142 | 6,683 | 0 | .09 | .58 | .30 | 0 | 0 | 0 | 2.20 | 34.57 | 47.46 | 14.10 | .70 |
| 10 | 139 | 8,608 | .12 | .03 | .89 | 0 | 0 | .05 | 0 | 1.63 | 41.09 | 45.82 | 9.58 | .79 |
| 11 | 119 | 9,790 | .11 | .22 | 1.15 | .26 | .08 | 0 | 0 | 3.60 | 40.34 | 43.45 | 10.21 | .57 |
| 12 | 110 | 10,735 | .16 | .24 | 1.88 | .12 | 0 | 0 | .46 | 2.00 | 41.36 | 42.09 | 11.08 | .61 |
| 13 | 94 | 10,776 | .19 | 1.09 | 2.23 | .28 | 0 | .19 | .32 | 2.26 | 37.04 | 42.58 | 13.14 | .70 |
| 14 | 83 | 11,036 | .04 | .57 | 1.68 | .28 | 0 | .15 | .03 | 1.77 | 36.51 | 45.51 | 12.50 | .97 |
| 15 | 68 | 10,735 | .31 | .95 | 2.18 | .76 | .57 | .71 | .39 | 1.05 | 33.89 | 45.75 | 12.45 | .99 |
| 16 | 51 | 9,266 | .10 | 1.06 | 2.44 | .31 | .14 | .51 | .67 | 2.23 | 32.43 | 47.51 | 11.34 | 1.26 |
| 17 | 53 | 10,973 | .63 | 2.04 | 3.91 | 1.13 | .84 | 1.59 | 1.64 | 2.42 | 26.05 | 46.87 | 11.09 | 1.80 |
| 18 | 34 | 8,208 | .74 | 2.74 | 5.12 | .80 | 1.44 | 1.47 | 1.71 | 1.62 | 21.99 | 45.39 | 14.12 | 2.85 |
| 19 | 35 | 8,706 | .23 | 2.89 | 5.25 | 1.45 | 2.52 | 4.53 | 2.46 | 1.72 | 18.62 | 44.02 | 14.23 | 2.09 |
| 20 | 31 | 8,819 | .19 | 3.19 | 6.07 | 1.44 | 2.94 | 4.54 | 2.19 | 1.18 | 17.63 | 43.66 | 14.66 | 2.32 |
| 21 | 31 | 9,545 | .84 | 4.32 | 7.06 | 1.85 | 4.84 | 4.43 | 2.16 | 1.17 | 18.33 | 37.89 | 14.26 | 2.84 |
| 22 | 20 | 6,847 | .34 | 3.52 | 9.62 | 3.39 | 2.35 | 5.65 | 2.10 | .23 | 12.27 | 39.16 | 18.04 | 3.33 |
| 23 | 15 | 5,587 | .54 | 2.24 | 11.12 | 3.45 | 5.48 | 4.83 | 2.63 | 2.56 | 10.69 | 40.95 | 12.30 | 3.22 |
| 24 | 14 | 5,830 | .74 | 4.05 | 9.31 | 3.57 | 3.98 | 5.28 | 2.45 | .62 | 6.96 | 42.88 | 16.38 | 3.77 |
| 25 | 17 | 6,776 | 2.89 | 7.16 | 11.82 | 4.19 | 4.34 | 5.07 | 2.10 | 1.46 | 6.05 | 32.31 | 18.60 | 7.02 |
| 26 | 11 | 5,145 | 2.53 | 6.26 | 13.12 | 8.07 | 6.61 | 5.87 | 1.94 | .70 | 7.83 | 27.58 | 15.65 | 3.85 |
| 27 | 9 | 3,717 | 5.70 | 11.97 | 16.71 | 6.70 | 1.32 | 1.78 | 1.16 | 0 | 4.90 | 21.68 | 15.79 | 12.29 |
| 28 | 12 | 6,299 | 4.72 | 7.73 | 11.02 | 7.21 | 3.21 | 3.48 | 2.78 | 0 | 5.38 | 26.78 | 19.11 | 8.59 |
| 29 | 10 | 5,398 | 4.59 | 8.26 | 17.17 | 9.91 | 5.30 | 5.95 | 2.22 | .13 | 3.83 | 16.95 | 20.30 | 5.37 |
| 30 | 6 | 3,384 | 4.52 | 11.73 | 12.20 | 5.53 | 4.79 | 6.80 | 2.60 | 0 | .59 | 19.36 | 21.84 | 10.05 |
| 31 | 10 | 6,183 | 2.30 | 13.08 | 22.06 | 7.84 | .61 | .76 | 2.09 | .55 | 3.12 | 22.29 | 14.35 | 10.95 |
| 32 | 5 | 3,739 | 3.13 | 14.04 | 30.28 | 7.78 | 2.19 | 1.44 | 1.07 | .96 | 4.95 | 14.50 | 13.85 | 5.80 |
| 33 | 7 | 5,439 | 5.61 | 13.83 | 16.25 | 8.73 | 6.20 | 3.77 | 1.12 | 0 | 2.19 | 21.88 | 13.50 | 6.93 |
| 34 | 3 | 2,254 | 5.46 | 15.26 | 14.91 | 6.17 | 1.42 | .71 | .71 | 0 | 3.37 | 21.12 | 16.06 | 14.82 |
| 35 | 4 | 3,620 | 1.27 | 13.01 | 23.07 | 9.45 | 2.38 | 2.32 | .88 | 0 | 3.20 | 21.88 | 15.52 | 7.02 |
| 36 | 6 | 5,578 | 4.89 | 11.87 | 19.02 | 13.41 | 3.48 | 3.24 | .39 | 0 | 1.88 | 17.48 | 14.29 | 10.04 |
| 37 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 38 | 1 | 1,060 | 8.58 | 6.51 | 21.51 | 8.96 | 5.28 | 9.81 | 3.02 | 0 | .47 | 14.81 | 19.15 | 1.89 |
| 39 | 2 | 2,055 | 14.99 | 26.62 | 22.04 | 12.31 | 0 | .78 | .78 | .54 | 4.77 | 8.81 | 5.64 | 2.73 |
| 40 | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 41 | 1 | 1,176 | 7.40 | 44.13 | 19.90 | 12.33 | 0 | 0 | 0 | .60 | 2.13 | 5.70 | 3.15 | 4.68 |
| Total | 1,431 | 212,703 | 1.50 | 4.57 | 7.70 | 3.09 | 1.93 | 2.18 | 1.21 | 1.39 | 21.41 | 37.61 | 13.95 | 3.46 |

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1973. Lumber yield from western white pine in northern Idaho. USDA Forest Serv. Res. Pap. PNW-153, 30 p., illus. Pacific Northwest Forest and Range Experiment Station, Portland, Oregon.

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The mission of the PACIFIC NORTHWEST FOREST AND RANGE EXPERIMENT STATION is to provide the knowledge, technology, and alternatives for present and future protection, management, and use of forest, range, and related environments.

Within this overall mission, the Station conducts and stimulates research to facilitate and to accelerate progress toward the following goals:

1. Providing safe and efficient technology for inventory, protection, and use of resources.
2. Development and evaluation of alternative methods and levels of resource management.
3. Achievement of optimum sustained resource productivity consistent with maintaining a high quality forest environment.

The area of research encompasses Oregon, Washington, Alaska, and, in some cases, California, Hawaii, the Western States, and the Nation. Results of the research will be made available promptly. Project headquarters are at:

| | |
|-------------------|-----------------------|
| Fairbanks, Alaska | Portland, Oregon |
| Juneau, Alaska | Olympia, Washington |
| Bend, Oregon | Seattle, Washington |
| Corvallis, Oregon | Wenatchee, Washington |
| La Grande, Oregon | |

*Mailing address: Pacific Northwest Forest and Range
Experiment Station
P.O. Box 3141
Portland, Oregon 97208*

The FOREST SERVICE of the U. S. Department of Agriculture is dedicated to the principle of multiple use management of the Nation's forest resources for sustained yields of wood, water, forage, wildlife, and recreation. Through forestry research, cooperation with the States and private forest owners, and management of the National Forests and National Grasslands, it strives — as directed by Congress — to provide increasingly greater service to a growing Nation.